

Access DB# 87849

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Jill Gray Examiner #: 66983 Date: 3/25/03
Art Unit: 1774 Phone Number 308 2381 Serial Number: 09/485034
Mail Box and Bldg/Room Location: 11E08 Results Format Preferred (circle): PAPER DISK E-MAIL
CP3

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Construction MaterialsInventors (please provide full names): Robert John BlytheEarliest Priority Filing Date: British Application 6/3/1998

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Pls search Clms - in particular, highlighted areas.

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STAFF USE ONLYSearcher: Jill Gray

Searcher Phone #: _____

Searcher Location: _____

Date Searcher Picked Up: _____

Date Completed: 3/25/03Searcher Prep & Review Time: 50

Clerical Prep Time: _____

Online Time: 10

Type of Search

NA Sequence (#) _____

AA Sequence (#) _____

Structure (#) _____

Bibliographic ✓

Litigation _____

Fulltext _____

Patent Family _____

Other _____

Vendors and cost where applicable

STN _____

Dialog _____

Questel/Orbit _____

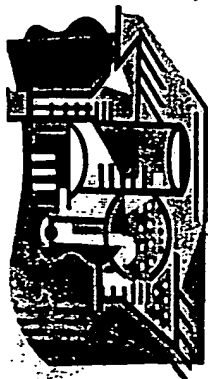
Dr. Link _____

Lexis/Nexis _____

Sequence Systems _____

WWW/Internet _____

Other (specify) _____



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Scientific and Technical Information Center

Search Results Feedback Form

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please contact the searcher whose name is circled below.

Kathleen Fuller 308-4290

John Calve 308-4139

Barba Koroma 305-3542

Eric Linnell 308-4143

All searchers are located in the library in CP3/4 3D62

EIC1700

Search Results

Feedback Form (Optional)



Scientific & Technical Information Center

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Kathleen Fuller, Team Leader, 308-4290, CP3/4 3D62

Voluntary Results Feedback Form

➤ *I am an examiner in Workgroup:* *Example:*

➤ *Relevant prior art found, search results used as follows:*

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ *Relevant prior art not found:*

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Search results were not useful in determining patentability or understanding the invention.

Other Comments:

Drop off completed forms in CP3/4 - 3D62 .

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 15:43:58 ON 25 MAR 2003

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FILE COVERS 1907 - 25 Mar 2003 VOL 138 ISS 13

FILE LAST UPDATED: 24 Mar 2003 (20030324/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L66

L2 4 SEA FILE=REGISTRY ABB=ON (105729-79-1/BI OR 106107-54-4/BI OR 288376-06-7/BI OR 9010-79-1/BI)
L6 3 SEA FILE=REGISTRY ABB=ON L2 NOT STOB?
L7 3 SEA FILE=REGISTRY ABB=ON SBS/CN
L8 1 SEA FILE=REGISTRY ABB=ON L7 AND BUTADIENE
L11 1 SEA FILE=REGISTRY ABB=ON "SEBS RUBBER"/CN
L41 30457 SEA FILE=HCAPLUS ABB=ON (RUBBER? OR ELASTOMER?) AND (GRANULE? OR GRANULAR? OR PARTICULATE? OR PARTICULATE#? OR GRAIN?)
L45 111 SEA FILE=HCAPLUS ABB=ON L41 AND (TENNIS? OR TRACK? OR BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE? OR SURFAC?)
L46 3 SEA FILE=HCAPLUS ABB=ON L41 AND RACETRACK?
L48 5 SEA FILE=HCAPLUS ABB=ON (L45 OR L46) AND THERMOPLAST?
L51 4 SEA FILE=REGISTRY ABB=ON L6 OR L8 OR L11
L52 125324 SEA FILE=HCAPLUS ABB=ON L51 OR STYREN?(3A) (BUTADIEN? OR ISOPREN?) OR ETHYLENE(3A) PROPYLENE
L53 13215 SEA FILE=HCAPLUS ABB=ON L52 AND (GRANULE? OR GRANULAR? OR PARTICULATE#? OR PARTICULATE? OR GRAIN?)
L59 433 SEA FILE=HCAPLUS ABB=ON L53 AND (TENNIS? OR TRACK? OR BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE? OR SURFAC?) OR RACETRACK?
L60 18 SEA FILE=HCAPLUS ABB=ON L59 AND (MELD? OR BIND?)
L61 10 SEA FILE=HCAPLUS ABB=ON L59 AND (RUBBER? OR ELASTOMER?)/SC
L62 5 SEA FILE=HCAPLUS ABB=ON L59 AND CONSTRUCT?(3A) MATERIAL?
L63 26 SEA FILE=HCAPLUS ABB=ON (L60 OR L61 OR L62)
L66 29 SEA FILE=HCAPLUS ABB=ON L63 OR L48

=> FILE WPIX

FILE 'WPIX' ENTERED AT 15:44:07 ON 25 MAR 2003

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FILE LAST UPDATED: 24 MAR 2003 <20030324/UP>
MOST RECENT DERWENT UPDATE: 200320 <200320/DW>
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>>> SLART (Simultaneous Left and Right Truncation) is now
available in the /ABEX field. An additional search field
/BIX is also provided which comprises both /BI and /ABEX <<<

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY <<<

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SEE <http://www.derwent.com/dwpi/updates/dwpicov/index.html> <<<

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PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

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=> D QUE L72

L2 4 SEA FILE=REGISTRY ABB=ON (105729-79-1/BI OR 106107-54-4/BI OR
288376-06-7/BI OR 9010-79-1/BI)
L6 3 SEA FILE=REGISTRY ABB=ON L2 NOT STOB?
L7 3 SEA FILE=REGISTRY ABB=ON SBS/CN
L8 1 SEA FILE=REGISTRY ABB=ON L7 AND BUTADIENE
L11 1 SEA FILE=REGISTRY ABB=ON "SEBS RUBBER"/CN
L51 4 SEA FILE=REGISTRY ABB=ON L6 OR L8 OR L11
L52 125324 SEA FILE=HCAPLUS ABB=ON L51 OR STYREN?(3A) (BUTADIEN? OR
ISOPREN?) OR ETHYLENE(3A) PROPYLENE
L53 13215 SEA FILE=HCAPLUS ABB=ON L52 AND (GRANULE? OR GRANULAR? OR
PARTICLE# OR PARTICULATE? OR GRAIN?)
L68 254 SEA FILE=WPIX ABB=ON L53 AND (TENNIS? OR TRACK? OR BASKETBAL?
OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR EQUEST?) (4A) (FLOOR
? OR COURT? OR ?GROUND? OR AREA? OR COURSE? OR SURFAC?) OR
RACETRACK?
L72 18 SEA FILE=WPIX ABB=ON L68 AND (BIND? OR MELD?)

=> D HIS L73

(FILE 'WPIX' ENTERED AT 15:43:07 ON 25 MAR 2003)
L73 48 S L71 OR L72

FILE 'HCAPLUS' ENTERED AT 15:43:58 ON 25 MAR 2003

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=> FILE RAPRA

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FILE LAST UPDATED: 19 MAR 2003 <20030319/UP>
FILE COVERS 1972 TO DATE

>>> The RAPRA Classification Code is available as a PDF file

>>> and may be downloaded free-of-charge from:
 >>> http://www.stn-international.de/stndatabases/details/rapra_classcodes.pdf

=> D QUE L37

L7 3 SEA FILE=REGISTRY ABB=ON SBS/CN
 L8 1 SEA FILE=REGISTRY ABB=ON L7 AND BUTADIENE
 L11 1 SEA FILE=REGISTRY ABB=ON "SEBS RUBBER"/CN
 L12 4 SEA FILE=REGISTRY ABB=ON L7 OR L8 OR L11
 L13 135332 SEA FILE=HCAPLUS ABB=ON L12 OR STYREN?(3A) (BUTADIEN? OR
 ISOPREN?) OR ETHYLENE(3A) PROPYLENE
 L14 13833 SEA FILE=HCAPLUS ABB=ON L13 AND (GRANULE? OR GRANULAR? OR
 PARTICLE# OR PATICULATE? OR GRAIN?)
 L16 27 SEA FILE=HCAPLUS ABB=ON L14 AND (TENNIS? OR TRACK? OR
 BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
 EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
 OR SURFAC?)
 L18 18659 SEA FILE=HCAPLUS ABB=ON THERMOPLAST?(4A) (RUBBER? OR ELASTOMER?
)
 L19 1643 SEA FILE=HCAPLUS ABB=ON L18 AND (GRANULE? OR GRANULAR? OR
 PARTICLE# OR PATICULATE? OR GRAIN?)
 L20 3 SEA FILE=HCAPLUS ABB=ON L19 AND (TENNIS? OR TRACK? OR
 BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
 EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
 OR SURFAC?)
 L21 29499 SEA FILE=HCAPLUS ABB=ON (RUBBER? OR ELASTOMER?) AND (GRANULE?
 OR GRANULAR? OR PARTICLE# OR PATICULATE? OR GRAIN?)
 L22 103 SEA FILE=HCAPLUS ABB=ON L21 AND (TENNIS? OR TRACK? OR
 BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
 EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
 OR SURFAC?)
 L25 5 SEA FILE=HCAPLUS ABB=ON L22 AND THERMOPLAS?
 L32 47 SEA FILE=RAPRA ABB=ON L16 OR L20 OR L25
 L33 37 SEA FILE=RAPRA ABB=ON L32 AND (PLAY SURFACE/CT OR SPORTS
 SURFACE/CT)
 L34 10 SEA FILE=RAPRA ABB=ON L33 NOT (RECYCL? OR TIRE? OR TYRE?)
 L36 15 SEA FILE=RAPRA ABB=ON L33 AND (MELD? OR BIND?)
 L37 21 SEA FILE=RAPRA ABB=ON L34 OR L36

=> FILE JICST

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=> D QUE L38

L7 3 SEA FILE=REGISTRY ABB=ON SBS/CN
 L8 1 SEA FILE=REGISTRY ABB=ON L7 AND BUTADIENE
 L11 1 SEA FILE=REGISTRY ABB=ON "SEBS RUBBER"/CN
 L12 4 SEA FILE=REGISTRY ABB=ON L7 OR L8 OR L11
 L13 135332 SEA FILE=HCAPLUS ABB=ON L12 OR STYREN?(3A) (BUTADIEN? OR
 ISOPREN?) OR ETHYLENE(3A) PROPYLENE
 L14 13833 SEA FILE=HCAPLUS ABB=ON L13 AND (GRANULE? OR GRANULAR? OR
 PARTICLE# OR PATICULATE? OR GRAIN?)
 L16 27 SEA FILE=HCAPLUS ABB=ON L14 AND (TENNIS? OR TRACK? OR

BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
OR SURFAC?)

L18 18659 SEA FILE=HCAPLUS ABB=ON THERMOPLAST? (4A) (RUBBER? OR ELASTOMER?
)

L19 1643 SEA FILE=HCAPLUS ABB=ON L18 AND (GRANULE? OR GRANULAR? OR
PARTICLE# OR PATICULATE? OR GRAIN?)

L20 3 SEA FILE=HCAPLUS ABB=ON L19 AND (TENNIS? OR TRACK? OR
BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
OR SURFAC?)

L21 29499 SEA FILE=HCAPLUS ABB=ON (RUBBER? OR ELASTOMER?) AND (GRANULE?
OR GRANULAR? OR PARTICLE# OR PATICULATE? OR GRAIN?)

L22 103 SEA FILE=HCAPLUS ABB=ON L21 AND (TENNIS? OR TRACK? OR
BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
OR SURFAC?)

L25 5 SEA FILE=HCAPLUS ABB=ON L22 AND THERMOPLAS?

L38 0 SEA FILE=JICST-EPLUS ABB=ON L16 OR L20 OR L25

=> FILE JAPIO

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FILE COVERS APR 1973 TO NOVEMBER 29, 2002

<<< GRAPHIC IMAGES AVAILABLE >>>

=> D QUE L39

L7 3 SEA FILE=REGISTRY ABB=ON SBS/CN

L8 1 SEA FILE=REGISTRY ABB=ON L7 AND BUTADIENE

L11 1 SEA FILE=REGISTRY ABB=ON "SEBS RUBBER"/CN

L12 4 SEA FILE=REGISTRY ABB=ON L7 OR L8 OR L11

L13 135332 SEA FILE=HCAPLUS ABB=ON L12 OR STYREN? (3A) (BUTADIEN? OR
ISOPREN?) OR ETHYLENE (3A) PROPYLENE

L14 13833 SEA FILE=HCAPLUS ABB=ON L13 AND (GRANULE? OR GRANULAR? OR
PARTICLE# OR PATICULATE? OR GRAIN?)

L16 27 SEA FILE=HCAPLUS ABB=ON L14 AND (TENNIS? OR TRACK? OR
BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
OR SURFAC?)

L18 18659 SEA FILE=HCAPLUS ABB=ON THERMOPLAST? (4A) (RUBBER? OR ELASTOMER?
)

L19 1643 SEA FILE=HCAPLUS ABB=ON L18 AND (GRANULE? OR GRANULAR? OR
PARTICLE# OR PATICULATE? OR GRAIN?)

L20 3 SEA FILE=HCAPLUS ABB=ON L19 AND (TENNIS? OR TRACK? OR
BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
OR SURFAC?)

L21 29499 SEA FILE=HCAPLUS ABB=ON (RUBBER? OR ELASTOMER?) AND (GRANULE?
OR GRANULAR? OR PARTICLE# OR PATICULATE? OR GRAIN?)

L22 103 SEA FILE=HCAPLUS ABB=ON L21 AND (TENNIS? OR TRACK? OR
BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
OR SURFAC?)

L25 5 SEA FILE=HCAPLUS ABB=ON L22 AND THERMOPLAS?

L39 3 SEA FILE=JAPIO ABB=ON L16 OR L20 OR L25

=> FILE COMPENDE

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L7 3 SEA FILE=REGISTRY ABB=ON SBS/CN
L8 1 SEA FILE=REGISTRY ABB=ON L7 AND BUTADIENE
L11 1 SEA FILE=REGISTRY ABB=ON "SEBS RUBBER"/CN
L12 4 SEA FILE=REGISTRY ABB=ON L7 OR L8 OR L11
L13 135332 SEA FILE=HCAPLUS ABB=ON L12 OR STYREN?(3A) (BUTADIEN? OR
ISOPREN?) OR ETHYLENE(3A) PROPYLENE
L14 13833 SEA FILE=HCAPLUS ABB=ON L13 AND (GRANULE? OR GRANULAR? OR
PARTICLE# OR PATICULATE? OR GRAIN?)
L16 27 SEA FILE=HCAPLUS ABB=ON L14 AND (TENNIS? OR TRACK? OR
BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
OR SURFAC?)
L18 18659 SEA FILE=HCAPLUS ABB=ON THERMOPLAST?(4A) (RUBBER? OR ELASTOMER?
)
L19 1643 SEA FILE=HCAPLUS ABB=ON L18 AND (GRANULE? OR GRANULAR? OR
PARTICLE# OR PATICULATE? OR GRAIN?)
L20 3 SEA FILE=HCAPLUS ABB=ON L19 AND (TENNIS? OR TRACK? OR
BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
OR SURFAC?)
L21 29499 SEA FILE=HCAPLUS ABB=ON (RUBBER? OR ELASTOMER?) AND (GRANULE?
OR GRANULAR? OR PARTICLE# OR PATICULATE? OR GRAIN?)
L22 103 SEA FILE=HCAPLUS ABB=ON L21 AND (TENNIS? OR TRACK? OR
BASKETBAL? OR PLAY? OR SPORT? OR ATHLETIC? OR HORSE? OR
EQUEST?) (4A) (FLOOR? OR COURT? OR ?GROUND? OR AREA? OR COURSE?
OR SURFAC?)
L25 5 SEA FILE=HCAPLUS ABB=ON L22 AND THERMOPLAS?
L40 1 SEA FILE=COMPENDEX ABB=ON L16 OR L20 OR L25

=> DUP REM L66 L73 L37 L39 L40

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 PROCESSING COMPLETED FOR L73
 PROCESSING COMPLETED FOR L37
 PROCESSING COMPLETED FOR L39
 PROCESSING COMPLETED FOR L40
 L74 95 DUP REM L66 L73 L37 L39 L40 (7 DUPLICATES REMOVED)

=> D L74 ALL 1-95

L74 ANSWER 1 OF 95 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
 AN 2002:927668 HCAPLUS
 DN 138:7580
 TI Composite material for all-weather surfaces suitable for race
 courses and equestrian sports
 IN Bennett, Victor George
 PA UK
 SO PCT Int. Appl., 15 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM E01C013-06
 CC 58-4 (Cement, Concrete, and Related Building Materials)
 Section cross-reference(s): 38
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002097194	A1	20021205	WO 2002-GB2576	20020530
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI GB 2001-13273 A 20010531

AB The surfaces comprises a base layer of compacted polymeric
particles of 20-60 mm size, an intermediate layer of compacted
 polymeric **granules** of mean **particle** size 3-25 mm, and
 a top layer of finely divided composite **particles** formed from a
thermoplastic polymer, finely divided sand, and wax-based
binder. The compacted **particles** are **rubber**
 flakes, the sand is coated with recycled plastic. The composite
particles are produced by blending polymer-coated finely divided
 sand with wax and **particulate elastomer** in the
 presence of an org. solvent. The based and intermediate layers are
 constructed by spreading and compaction of the **granules** to the
 appropriate thickness (200 mm and about 150 mm, resp.), then the top

composite layer (at least 150 mm) is deposited, compacted and a final rolling.

- ST **rubber particulate polymer granule base**
intermediate layer **racetrack**; composite recycled plastic coated
sand **thermoplastic** wax track; **surface exterior**
sports track elastomer plastic composite
compaction
- IT Waxes
RL: TEM (Technical or engineered material use); USES (Uses)
(**binder**, track layer; **rubber granules** and
plastic **particles** and sand/recycled plastic composite layers
of all-weather **surfaces** for **racetrack** and
equestrian sports)
- IT Synthetic **rubber**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(compacted **granules**, track layer; **rubber**
granules and plastic **particles** and sand/recycled
plastic composite layers of all-weather **surfaces** for
racetrack and **equestrian sports**)
- IT Water-resistant materials
(**construction materials**; **rubber**
granules and plastic **particles** and sand/recycled
plastic composite layers of all-weather **surfaces** for
racetrack and **equestrian sports**)
- IT Polymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**particulate**, track layer; **rubber granules**
and plastic **particles** and sand/recycled plastic composite
layers of all-weather **surfaces** for **racetrack** and
equestrian sports)
- IT Sand
RL: TEM (Technical or engineered material use); USES (Uses)
(plastic-coated, track layer; **rubber granules** and
plastic **particles** and sand/recycled plastic composite layers
of all-weather **surfaces** for **racetrack** and
equestrian sports)
- IT Compaction
Composites
Spreading
(**rubber granules** and plastic **particles**
and sand/recycled plastic composite layers of all-weather
surfaces for **racetrack** and **equestrian**
sports)
- IT Waste plastics and **rubbers**
(sand coating, track layer; **rubber granules** and
plastic **particles** and sand/recycled plastic composite layers
of all-weather **surfaces** for **racetrack** and
equestrian sports)
- IT Plastics, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**thermoplastics**, **particulate**, track layer;
rubber granules and plastic **particles** and
sand/recycled plastic composite layers of all-weather **surfaces**
for **racetrack** and **equestrian sports**)
- IT **Construction materials**
(water-resistant; **rubber granules** and plastic
particles and sand/recycled plastic composite layers of
all-weather **surfaces** for **racetrack** and

equestrian sports)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Bacher, W; DE 20000830 U 2000
- (2) Collins Martin Enterprises; WO 8907635 A 1989 HCAPLUS
- (3) Nippon Oil Co Ltd; EP 0466514 A 1992

L74 ANSWER 2 OF 95 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
AN 2002:882274 HCAPLUS
TI High temperature superconducting **racetrack** coil
IN Laskaris, Evangelos Trifon; Alexander, James Pellegrino; Ranze, Richard Andrew
PA USA
SO U.S. Pat. Appl. Publ.
CODEN: USXXCO
DT Patent
LA English
IC ICM G01B001-00
ICS H01L039-00
NCL 029605000
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002170166	A1	20021121	US 2001-854464	20010515
PRAI	US 2001-854464		20010515		

AB A **racetrack** shaped high temperature superconducting (HTS) coil is fabricated by layer winding HTS tape under tension on a precision coil form with a **binder** such as pre-preg filament-ply interlayer insulation. The coil form includes a **racetrack** shaped bobbin, two side plates and a series of blocks that define the outside surface of the coil. The outside surface of the winding is over-wrapped with a copper foil bonded to heat exchanger tubing. The coil is baked in the coil form to cure the epoxy then released from the coil form. The resulting coil structure is a strong winding composite built to close tolerance dimensions.

L74 ANSWER 3 OF 95 HCAPLUS COPYRIGHT 2003 ACS
AN 2003:53598 HCAPLUS
DN 138:74518
TI Production and composition of rubber **track surface**
IN Wu, Zhengyong; Zhuang, Weiyi
PA Shanghai Hangwei Science & Technology Development Co. Ltd., Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 5 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
IC ICM E01C013-06
ICS C09D175-04
CC 39-15 (Synthetic **Elastomers** and Natural **Rubber**)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1329199	A	20020102	CN 2000-116553	20000616
PRAI	CN 2000-116553		20000616		

AB The rubber **surface** for **track** and field events is produced by: layering polyurethane, **binding** agent and other rubber **granules** (may also contain waste tire **particle**)

on the concrete or pitch base in order, and topping with colored rubber **granule** on the topmost layer. The polyurethane is a monocomponent comprising: (1) 10-22% isocyanate (such as toluene diisocyanate, diphenylmethane 4,4'-diisocyanate, polymethylene polyisocyanate, 1,6-hexamethylenediisocyanate and their mixt.); (2) 90-70% polyether polyol; and (3) 0-8% chain extending agent, reacted at 70-105 .degree.C for 2-4 h. The rubber **granule** is **ethylene propylene** diene copolymer **granule** with diam. of 0.5-2 mm, tensile strength of 0.3-1.0 MPa, and elongation rate of 300-700%.

ST rubber track polyether polyurethane

IT Scrap tires

(**particles**; prodn. and compn. of rubber **track surface**)

IT Polyurethanes, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polyether-; prodn. and compn. of rubber **track surface**)

IT EPDM rubber

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(prodn. and compn. of rubber **track surface**)

L74 ANSWER 4 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 2002-315284 [35] WPIX

DNN N2002-246792 DNC C2002-091712

TI Underlay for synthetic grass layer used as **playing surface**, comprises resilient layer with upper surface having indentations partially filled with **particulate** filler.

DC A86 P36 Q41

IN BALDERSON, C E; SCHAUMBERG, K J; WARWICK, B R

PA (PROF-N) PROFESSIONAL GOLF SOLUTIONS PTY LTD

CYC 96

PI WO 2002009825 A1 WO 20020207 (200235)* EN 19p A63B069-36

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU
SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001077392 A 20020213 (200238) A63B069-36

ADT WO 2002009825 A1 WO 2001-AU939 20010801; AU 2001077392 A AU 2001-77392
20010801

FDT AU 2001077392 A Based on WO 200209825

PRAI AU 2000-9144 20000802

IC ICM A63B069-36

ICS A63C019-04; **E01C013-08**

AB WO 200209825 A UPAB: 20020603

NOVELTY - An underlay (12) comprises a resilient layer comprising an upper surface formed with indentations, and **particulate** filler for the indentations.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(A) a synthetic **playing surface** comprising the underlay and an upper layer of a synthetic grass; and

(B) a method of constructing a synthetic **playing surface** (11) comprising providing a base layer (14), forming the above-mentioned underlay, laying a synthetic grass over the underlay, and placing a **particulate** infill on the grass layer.

USE - For synthetic grass layer used as synthetic **playing surface** (claimed), or grass carpet for golf green.

ADVANTAGE - The invention provides synthetic grass layer with improved performance and that holds larger amount of infill than conventional grass surfaces. It provides golf green that can emulate a natural grass green both when a ball is chipped to the green and during putting. The presence of the **particulate** filler in the convolutions provides dampening effect between the grass and the underlay, while providing rigidity for the ball to roll in a natural manner after final bounce. The surface thus produce has desirable energy absorbing properties.

DESCRIPTION OF DRAWING(S) - The figure is a sectional view of a synthetic grass surface.

Playing surface 11

Underlay 12

Dressing layer 13

Base layer 14

Convolutions 15

Backing layer 16

Pile elements 17

Silica 20

Dwg.1/1

FS CPI GMPI

FA AB; GI

MC CPI: A12-F01A

L74 ANSWER 5 OF 95 RAPRA COPYRIGHT 2003 RAPRA

AN R:850985 RAPRA FS Rapra Abstracts

TI ONE STEP CLOSER TO NATURE.

AU Kuck B; Neto A (PolyOne Werk Melos GmbH)

SO Kunststoffe Plast Europe 92, No.1, Jan. 2002, p.33-6

ISSN: 0941-3596

PY 2002

DT Journal

LA English

AB The advantages of artificial turf over natural turf for sports applications, particularly soccer, are considered and the development of novel EPDM **granules**, which have been adapted to comply with the technical and ecological requirements for artificial turf infill **granules**, by PolyOne Werk Melos GmbH is reported. The ecological compatibility of the components of these EPDM infill **granules** is also discussed. (Kunststoffe, 92, No.1, 2002, p.84-7)

CC 42C11C12D1; 6R; 6G

SC *QP; QH; KE

CT APPLICATION; ARTIFICIAL GRASS; COMPANIES; COMPANY; COMPATIBILITY; DATA; ECOLOGY; ELASTOMER; ENVIRONMENTAL PROTECTION; EPDM; **ETHYLENE-PROPYLENE-DIENE TERPOLYMER; GRANULE; GRAPH;** PRODUCT ANNOUNCEMENT; RUBBER; SPORTS APPLICATION; **SPORTS SURFACE**; TECHNICAL

SHR **SPORTS SURFACES**, artificial grass, EPDM; **ETHYLENE PROPYLENE DIENE TERPOLYMERS, sports surfaces**

GT EUROPEAN COMMUNITY; EUROPEAN UNION; GERMANY; WESTERN EUROPE

L74 ANSWER 6 OF 95 RAPRA COPYRIGHT 2003 RAPRA

AN R:853165 RAPRA FS Rapra Abstracts

TI RECYCLED RUBBER CRUMB - A GROWING MARKET IN SAFETY SURFACES.

AU Peel J D (Industrial Copolymers Ltd.)

SO British Plastics and Rubber April 2002, p.20-1
ISSN: 0307-6164

PY 2002

DT Journal

LA English

AB One use for scrap tyres is to grind them down to crumb and combine them with a PU resin for use as **sports** and other safety **playing surfaces**. The main **binder** used for these applications is a polymeric one-pack MDI moisture cure PU prepolymer. There are two main applications for rubber crumb surfacing: factory (moulded) slab or tile and in-situ casting using the wet lay process. For the latter application, multilayer construction of the crumb mixtures is often employed to achieve the desired performance criteria of hardness, durability and permeability.

CC 6R1; 62.15; 43C6; 51PC

SC *QP; OQ; MB; KT

CT ABRASION RESISTANCE; ABRASION RESISTANT; ADHESION; **BINDER**; BLEND; CASTING; COLOR; COLOUR; COMPANIES; COMPANY; CONSUMPTION; CRUMB RUBBER; CURE TEMPERATURE; CURE TIME; CURING; DATA; DECORATIVE; DEPTH; ECONOMIC INFORMATION; ELASTOMER; ENERGY ABSORPTION; EPDM; **ETHYLENE-PROPYLENE-DIENE TERPOLYMER**; IN-SITU; MECHANICAL PROPERTIES; MOISTURE CURING; **PARTICLE SIZE**; **PLAY SURFACE**; POLYURETHANE; PREPOLYMER; PRIMER; PROPERTIES; PU; RECYCLING; RUBBER; SCRAP; SCRAP TIRES; SCRAP TYRES; SLAB; SOLIDS CONTENT; **SPORTS SURFACE**; STANDARD; STATISTICS; SUBSTRATE; TEST METHOD; TESTING; THICKNESS; TILE; TIRE; TYRE; UNDERLAY; VULCANISATION TIME; VULCANIZATION TIME; WEAR RESISTANCE; WEAR RESISTANT

SHR CRUMB RUBBER, **sports surfaces**; **SPORTS SURFACES**, crumb rubber, PU; URETHANE POLYMERS, **sports surfaces, binders**

GT EUROPEAN COMMUNITY; EUROPEAN UNION; UK; WESTERN EUROPE

L74 ANSWER 7 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 2003:159524 HCAPLUS

DN 138:154898

TI Manufacture two-layered color rubber floor tile using reclaimed waste tire

IN Shi, Yongchang; Shi, Jianhua

PA Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
CODEN: CNXXEV

DT Patent

LA Chinese

IC ICM B32B025-04

CC 39-15 (Synthetic **Elastomers** and Natural **Rubber**)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1322625	A	20011121	CN 2000-108529	20000504
PRAI	CN 2000-108529		20000504		

AB Title floor tile is manufd. by forming the base layer using 0.5-6-mm **particles** of reclaimed tire and forming the surface layer using vulcanized, colored compn. contg. 20-50% of rubber. The **floor** tile is in **playground**.

ST rubber floor tile manuf reclaimed tire

IT Tiles
(floor; manuf. two-layered color rubber floor tile using reclaimed waste tire)

IT Molding of plastics and rubbers

Recycling of plastics and rubbers

Scrap tires

(manuf. two-layered color rubber floor tile using reclaimed waste tire)

IT Butyl rubber, uses

EPDM rubber

Natural rubber, uses

Neoprene rubber, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(manuf. two-layered color rubber floor tile using reclaimed waste tire)

IT Butadiene rubber, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(of cis-1,4-configuration; manuf. two-layered color rubber floor tile using reclaimed waste tire)

IT 9003-17-2

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(butadiene rubber, of cis-1,4-configuration; manuf. two-layered color rubber floor tile using reclaimed waste tire)

IT 9010-85-9

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(butyl rubber, manuf. two-layered color rubber floor tile using reclaimed waste tire)

IT 9003-55-8, **Butadiene-styrene** copolymer

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(manuf. two-layered color rubber floor tile using reclaimed waste tire)

IT 9010-98-4

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(neoprene rubber, manuf. two-layered color rubber floor tile using reclaimed waste tire)

L74 ANSWER 8 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 2002-188350 [24] WPIX

DNN N2002-142818 DNC C2002-058156

TI Synthetic grass assembly for installation on supporting substrates, includes pile fabric with sheet backing and synthetic ribbons, infill layer of **particulate** material, and top course exclusive of resilient **granules**.

DC A84 Q41

IN PREVOST, J

PA (FIEL-N) FIELDTURF HOLDINGS INC

CYC 96

PI WO 2001098589 A2 20011227 (200224)* EN 34p E01C013-08 <--

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU
SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001067237 A 20020102 (200230) E01C013-08 <--

GB 2376639 A 20021224 (200302) E01C013-08 <--

ADT WO 2001098589 A2 WO 2001-CA922 20010621; AU 2001067237 A AU 2001-67237
20010621; GB 2376639 A WO 2001-CA922 20010621, GB 2002-20077 20020829

FDT AU 2001067237 A Based on WO 200198589; GB 2376639 A Based on WO 200198589

PRAI US 2000-598149 20000621

IC ICM **E01C013-08**

AB WO 200198589 A UPAB: 20020416

NOVELTY - A synthetic grass assembly comprises a pile fabric with a flexible sheet backing and upstanding synthetic ribbons. An infill layer of **particulate** material is disposed between the ribbons. The infill layer comprises a bottom course of intermixed hard and resilient **granules**. A top course is exclusive of resilient **granules** disposed on the bottom course.

DETAILED DESCRIPTION - A synthetic grass assembly for installation on a supporting substrate, comprises a pile fabric with a flexible sheet backing (1) and upstanding synthetic ribbons (2) of a selected length. The ribbons extend upwardly from an upper surface of the backing. An infill layer (3) of **particulate** material is disposed interstitially between the upstanding ribbons on the backing, and a depth of less than the length of the ribbons. The **particulate** material is hard, or resilient **granules**. The infill layer comprises a bottom course (5) of intermixed hard and resilient **granules** of identical size distribution, disposed on the backing. A top course (6) is exclusive of resilient **granules** disposed on the bottom course. An upper portion (7) of the synthetic ribbons extend upwardly from the surface of the top course.

USE - The assembly is useful for installation on supporting soil substrates, e.g. athletic playing field. It is also used in any area suitable for grass cover such as high traffic landscape areas, road and highway medians, indoor gardens or golf greens, and **equestrian surfaces**.

ADVANTAGE - The synthetic assembly retain its properties throughout use without substantial segregation or compaction of the infill, and with reduced requirement for periodic brushing of the surface. It enhances the resilience and reduces the abrasive nature of conventional **granular** infills filling the interstices of the synthetic grass ribbons while enabling the cleats of athletic shoes to properly release without risk of injury.

DESCRIPTION OF DRAWING(S) - The figure shows a cross-section through the synthetic grass assembly.

Flexible sheet backing 1

Synthetic ribbons 2

Infill layer 3

Bottom course 5

Top course 6

Upper portion 7

Dwg.1/6

FS CPI GMPI

FA AB; GI

MC CPI: A12-F01A

L74 ANSWER 9 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 2002-129796 [17] WPIX

DNC C2002-039749

TI Synthetic mulch used as **playground surface**, comprises coated **rubber particles** consisting of natural polymers and synthetic high polymers.

DC A18 A25 A97

IN GREENBERG, L M; SMITH, J A

PA (GREE-I) GREENBERG L M; (SMIT-I) SMITH J A

CYC 1

PI US 2001047051 A1 20011129 (200217)* 6p C08J005-10

ADT US 2001047051 A1 CIP of US 1999-321779 19990527, US 2001-874178 20010604
 PRAI US 2001-874178 20010604; US 1999-321779 19990527
 IC ICM C08J005-10

ICS C08L027-00; C08L067-00; C08L075-00;
 C08L083-00

AB US2001047051 A UPAB: 20020313

NOVELTY - A synthetic mulch comprises **rubber particles** and 2-20 vol.% coating. The **rubber** consists of natural polymers and synthetic high polymers. The **rubber particles** have an outer surface designed and dimensioned to look like natural mulch consisting of pea gravel, wood chips, and tree bark; and to be 1/16 to 8 inches long, and 1/16 to 2 inches wide.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of forming the above-mentioned synthetic mulch comprising shredding the **rubber** to form **rubber particles** of one quarter to 4 inches sizes, adding coating to the shredded **particles**, and tumbling the coating and the **rubber particles**.

USE - Used as mulch or as a **playground surface**, or for stifling weed growth and forming a surface that is softer than the ground.

ADVANTAGE - The inventive mulch can be designed, dimensioned, and colored to look like a natural mulch. It can be textured, does not have sharp edges, and is available in various colors. The use of **rubber** allows for wider variety of textures than synthetic mulches made from **thermoplastics**.

Dwg.0/2

FS CPI

FA AB

MC CPI: A12-R03; A12-W04A

L74 ANSWER 10 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 2001-126428 [14] WPIX

CR 2001-126425 [10]; 2001-126426 [10]; 2001-126427 [10]; 2001-149893 [10]

DNN N2001-093222

TI Joining sections of sporting activity surfaces for turfed race courses turf tray moving system with reconfigurable crossing with the edges having a constant different radius of curvature and with both gaps curved.

DC P36 Q41

IN EVERETT, R; MORLEY, S; MORTON, P; WHITWORTH, A D

PA (CAVE-I) CAVENDISH P A M; (KIMM-I) KIMMINS M B J; (WEAT-I) WEATHERBY J R;
 (CAVE-I) CAVENDISH P A A

CYC 1

PI GB 2352192 A 20010124 (200114)* 51p A63K001-00

GB 2352192 B 20010725 (200143) A63K001-00

ADT GB 2352192 A GB 2000-23937 20000929; GB 2352192 B GB 2000-23937 20000929

PRAI GB 1999-23520 19991005; GB 1999-23325 19991001

IC ICM A63K001-00

ICS E01C013-08

AB GB 2352192 A UPAB: 20010801

NOVELTY - The joining sections comprises turf tray moving system (150) with reconfigurable crossing (152) crossed between the turfed **racetrack** (154) and the road (156). The **racetrack** edge (168) has a constant but different radius of curvature and both edges are curved about same setting out node point (170). The turfed surface is moved into the gap of the **racetrack** closing the gap normally for the road crossing and aligns with fixed wedges (180).

USE - For use as joining sections of sporting activity surfaces

reconfigurable

ADVANTAGE - The joining sections has an improved reconfigurable tray moving apparatus providing an accurate assembly of reconfigurable activity surface.

DESCRIPTION OF DRAWING(S) - Figure of a schematic plan view of the turf tray moving system.

Tray turf moving system 150

Reconfigurable crossing 152

Turfed **racetrack** 154

Road 156

Racetrack edge 168

Node point 170

Fixed wedges 180

Dwg. 7/15

FS GMPI

FA AB; GI

L74 ANSWER 11 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 2001-126426 [14] WPIX

CR 2001-126425 [10]; 2001-126427 [10]; 2001-126428 [10]; 2001-149893 [10]

DNN N2001-093220

TI Closing sections of sporting activity surfaces for turfed race courses turf tray moving system with reconfigurable crossing with the edges having a constant different radius of curvature and with both gaps curved.

DC P36 Q41

IN EVERETT, R; MORLEY, S; MORTON, P; WHITWORTH, A D

PA (CAVE-I) CAVENDISH P A M; (KIMM-I) KIMMINS M B J; (WEAT-I) WEATHERBY J R

CYC 1

PI GB 2352189 A 20010124 (200114)* 57p A63K001-00

GB 2352189 B 20010725 (200143) A63K001-00

ADT GB 2352189 A GB 2000-23934 20000929; GB 2352189 B GB 2000-23934 20000929

PRAI GB 1999-23520 19991005; GB 1999-23325 19991001

IC ICM A63K001-00

ICS A63C019-00; **E01C013-08**

AB GB 2352189 A UPAB: 20010801

NOVELTY - The joining sections comprises turf tray moving system (150) with reconfigurable crossing (152) crossed between the turfed **racetrack** (154) and the road (156). The **racetrack** edge (168) has a constant but different radius of curvature and both edges are curved about same setting out node point (170). The turfed surface is moved into the gap of the **racetrack** closing the gap normally for the road crossing and aligns with fixed wedges (180).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of closing a fixed gap.

USE - For use in closing gaps in a sporting activity surface such as a turfed **racetrack**.

ADVANTAGE - More than one tray can be used to close the gap from one or both sides, with a mechanism used providing a reconfigurable **racetrack** crossing at the intersection point.

DESCRIPTION OF DRAWING(S) - Figure of a schematic plan view of the turf tray moving system.

Tray turf moving system 150

Reconfigurable crossing 152

Turfed **racetrack** 154

Road 156

Racetrack edge 168

Node point 170

Fixed wedges 180

Dwg. 7/15

FS GMPI

FA AB; GI

L74 ANSWER 12 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 2001-126425 [14] WPIX

CR 2001-126426 [14]; 2001-126427 [14]; 2001-126428 [14]; 2001-149893 [16]

DNN N2001-093219

TI Method of joining sections of sporting activity surfaces, particularly for turfed racecourses and sports stadia, using a movable tray with a first section which contacts a second section of the surface along an inclined edge.

DC P36 Q41

IN EVERETT, R; MORLEY, S; MORTON, P; WHITWORTH, A D; WHITWORTH, A

PA (CAVE-I) CAVENDISH P A M; (KIMM-I) KIMMINS M B J; (WEAT-I) WEATHERBY J R

CYC 95

PI GB 2352188 A 20010124 (200114)* 53p E01C013-08 <--

FR 2799220 A1 20010406 (200122) E01C009-00

WO 2001024894 A1 20010412 (200123) EN A63C019-00

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2000075377 A 20010510 (200143) A63C019-00

GB 2352188 B 20010725 (200143) E01C013-08 <--

FR 2805831 A1 20010907 (200153) E01C009-00

FR 2805832 A1 20010907 (200153) E01C009-00

FR 2805833 A1 20010907 (200153) E01C009-00

EP 1225962 A1 20020731 (200257) EN A63C019-00

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI

IE 82485 B 20020918 (200274) E01C013-08 <--

IE 82621 B 20021211 (200305) A63K001-00

IE 82625 B 20021211 (200305) E01C013-08 <--

IE 82626 B 20021211 (200305) A63K001-00

IE 82750 B 20030219 (200317) E01C013-08 <--

ADT GB 2352188 A GB 2000-23932 20000929; FR 2799220 A1 FR 2000-12418 20000929;

WO 2001024894 A1 WO 2000-GB3739 20000929; AU 2000075377 A AU 2000-75377

20000929; GB 2352188 B GB 2000-23932 20000929; FR 2805831 A1 Add to FR

2000-12418 20000929, FR 2001-129 20010105; FR 2805832 A1 Add to FR

2000-12418 20000929, FR 2001-130 20010105; FR 2805833 A1 Add to FR

2000-12418 20000929, FR 2001-131 20010105; EP 1225962 A1 EP 2000-964441

20000929, WO 2000-GB3739 20000929; IE 82485 B IE 2000-778 20000926; IE

82621 B IE 2001-878 20000926; IE 82625 B IE 2001-884 20000926; IE 82626 B

IE 2001-885 20000926; IE 82750 B IE 2001-883 20000926

FDT AU 2000075377 A Based on WO 200124894; EP 1225962 A1 Based on WO

200124894; IE 82621 B Div ex IE 82485; IE 82625 B Div ex IE 82485; IE

82626 B Div ex IE 82485; IE 82750 B Div ex IE 82485

PRAI GB 1999-23520 19991005; GB 1999-23325 19991001

IC ICM A63C019-00; E01C009-00; E01C013-08

ICS A63K001-00; E01C009-08; E01C013-00; E01C013-02

AB GB 2352188 A UPAB: 20030312

NOVELTY - In a method of reconfigurably joining activity surfaces together, involves one section of activity surface which is contained in a movable tray (158) and is provided with an edge (172) inclined to the vertical which is complementary to an edge (168) on the fixed section

(154). The two aforementioned edges abut when the tray is in operative position and provide a continuous surface. When providing e.g. a turfed surface in an otherwise permanent road gap of a racecourse crossing, the movable tray can be placed into the gap and then lowered into abutting relationship so that the weight of the movable section forms a pressure joint.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are given for: (i) a reconfigurable activity surface comprising a number of sections, and (ii) an activity pitch for use in a stadium.

USE - For reconfigurably joining turfed and non turfed sections of an activity surface, or when replacing worn surfaces of turfed or non turfed sports surfaces such as pitches or **racetracks**. Especially in sports stadia which have a football pitch, hockey field, athletics track, but which also must cater for dog and horse racing, concerts, e.t.c.

ADVANTAGE - The activity surface is quickly and easily reconfigured, and the reconfigured surface is uniform, which is important at horse **racetrack**-road crossing points, or inside the six-yard box of football fields.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic cross section of the turf tray and **racetrack** edge.

fixed section 154

road 156

movable tray 158

edge 168

concrete retaining structure 186

Dwg.8/15

FS GMPI

FA AB; GI

L74 ANSWER 13 OF 95 RAPRA COPYRIGHT 2003 RAPRA

AN R:816156 RAPRA FS Rapra Abstracts

TI WHAT TYPE SUITS YOU?

SO Sports Industry 157, No.4, March/April 2001, p.46-8
ISSN: 0261-5665

PY 2001

DT Journal

LA English

AB The **sports floor** has a crucial role to play in the success of any facility; the types of surfaces available are briefly reviewed. Timber is one of the most widely used materials in the construction of **sports floor surfaces** and is available in a variety of forms including strips, blocks, composite boarding such as plywood or MDF, and composite tiles made from timber **particles** and cement. Sheet floors, in situ polymeric, textile and portable surfaces are discussed.

CC 6R1

SC *QP

CT CARPET; CELLULAR MATERIAL; **ELASTOMER**; GRANULATE; MATERIAL REPLACEMENT; PLASTIC; POLYURETHANE; PU; **RUBBER**; SPORTS EQUIPMENT; SPORTS GOODS; **SPORTS SURFACE**; TEXTILE; **THERMOPLASTIC**; THERMOSET; WOOD

SHR **SPORTS SURFACES**

GT EUROPEAN COMMUNITY; EUROPEAN UNION; UK; WESTERN EUROPE

L74 ANSWER 14 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 2000:169321 HCAPLUS

DN 132:209277

TI Process for coloring EPDM rubber to produce **granules** for

blending with polyurethane resins or to use by themselves to create safety and **athletic surfaces**

IN Calvo, Luis M.; Noskin, Steve; Kahan, Sansodeen; McWilliams, Matthew
PA Polymer Plastics, USA

SO U.S., 11 pp.
CODEN: USXXAM

DT Patent

LA English

IC ICM B05D007-00

NCL 427214000

CC 42-11 (Coatings, Inks, and Related Products)

Section cross-reference(s): 39

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
✓PI	US 6036998	A	20000314	US 1997-902305	19970729
PRAI	US 1997-902305		19970729		

AB A method using silanes, titanates, or zirconates and coloring materials provides a durable and color coating to black EPDM rubber **granules** or other synthetic materials for **athletic surfaces**.
Thus, 2 tons 1-3 mm-diam. EPDM was treated with 10% Ken React Lica 12 WE 33 titanate water, blended (1 part) with 10 parts PolyFlor Green, an acrylic coating, heated to 425.degree.F to give a durable coating, mixed with a polyurethane and used to form rubber tiles.

ST EPDM rubber polyurethane tile; **athletic surface**
coating EPDM rubber color; safety polyurethane EPDM **athletic surface**

IT Sporting goods
(athletic fields; durable coating to rubber **granules** for blends with polyurethane for **athletic surfaces** and tiles)

IT **Binders**
Coating materials
Coloring
Coupling agents
Crosslinking
Primers (paints)
Recycling of plastics and rubbers
Scrap tires
Spraying apparatus
Tiles

(durable coating to rubber **granules** for blends with polyurethane for **athletic surfaces** and tiles)

IT Silanes
Titanates
Zirconates
RL: MOA (Modifier or additive use); USES (Uses)
(durable coating to rubber **granules** for blends with polyurethane for **athletic surfaces** and tiles)

IT Acrylic polymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(durable coating to rubber **granules** for blends with polyurethane for **athletic surfaces** and tiles)

IT Epoxy resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(durable coating to rubber **granules** for blends with polyurethane for **athletic surfaces** and tiles)

IT Polymer blends

- RL: TEM (Technical or engineered material use); USES (Uses)
(durable coating to rubber **granules** for blends with
polyurethane for **athletic surfaces** and tiles)
- IT Polyurethanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(durable coating to rubber **granules** for blends with
polyurethane for **athletic surfaces** and tiles)
- IT **Ethylene-propylene** rubber
Styrene-butadiene rubber, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(**granules**; durable coating to rubber **granules** for
blends with polyurethane for **athletic surfaces** and
tiles)
- IT Mixers (processing apparatus)
(ribbon blender; durable coating to rubber **granules** for
blends with polyurethane for **athletic surfaces** and
tiles)
- IT 919-30-2
RL: MOA (Modifier or additive use); USES (Uses)
(A-1100; durable coating to rubber **granules** for blends with
polyurethane for **athletic surfaces** and tiles)
- IT 260547-03-3, PolyFlor Green
RL: TEM (Technical or engineered material use); USES (Uses)
(PolyFlor Green; durable coating to rubber **granules** for
blends with polyurethane for **athletic surfaces** and
tiles)
- IT 260547-72-6, Vitriturf **Binder** Aliphatic
RL: MOA (Modifier or additive use); USES (Uses)
(Vitriturf **Binder** Aliph.; durable coating to rubber
granules for blends with polyurethane for **athletic
surfaces** and tiles)
- IT 260547-70-4, Vitriturf **Binder** Summer
RL: MOA (Modifier or additive use); USES (Uses)
(Vitriturf **Binder** Summer Grade; durable coating to rubber
granules for blends with polyurethane for **athletic
surfaces** and tiles)
- IT 260547-71-5, Vitriturf **Binder** Winter
RL: MOA (Modifier or additive use); USES (Uses)
(Vitriturf **Binder** Winter Grade; durable coating to rubber
granules for blends with polyurethane for **athletic
surfaces** and tiles)
- IT 260546-51-8, Ken-React LICA 12WE33
RL: MOA (Modifier or additive use); USES (Uses)
(durable coating to rubber **granules** for blends with
polyurethane for **athletic surfaces** and tiles)
- IT **9010-79-1**
RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(**ethylene-propylene** rubber, **granules**;
durable coating to rubber **granules** for blends with
polyurethane for **athletic surfaces** and tiles)
- IT 9003-55-8
RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(**styrene-butadiene** rubber, **granules**;
durable coating to rubber **granules** for blends with
polyurethane for **athletic surfaces** and tiles)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Coke; US 4614686 1986
- (2) Damberg; US 5151230 1992 HCAPLUS
- (3) Evans; US 3908043 1975 HCAPLUS
- (4) Iwasa; US 4442167 1984
- (5) Jakubisin; US 5543172 1996 HCAPLUS
- (6) Nakasuji; US 4808483 1989 HCAPLUS
- (7) Perry, J; Chemical Engineers' Handbook 1963, P21
- (8) Sasaki; US 5135797 1992
- (9) Yamada; US 5589225 1996

L74 ANSWER 15 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:76117 HCAPLUS

DN 136:89800

TI Polymeric bitumen modifier containing waste diene rubber and EPDM rubber

IN Rakov, K. V.; Suvorova, A. I.; Kovaleva, M. V.; Matushkin, V. G.;
Sukhinin, N. S.; Shelomentsev, V. A.

PA Russia

SO Russ., No pp. given

CODEN: RUXXE7

DT Patent

LA Russian

IC ICM C08L095-00

CC 58-4 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 38, 39

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	RU 2158742	C1	20001110	RU 1999-115693	19990719
PRAI	RU 1999-115693		19990719		
AB	A bitumen modifier is prepd. in the form of a solid non-sticky compn. which is easily transported and directly added to the heated bitumen at the construction site. This modifier is comprised of bitumen 50-80, waste rubber particles (crumbs) predissolved in bitumen 10-25, diene rubber 1-5, polyethylene rubber or ethylene-propylene -diene ternary copolymer 1-10, and hydrocarbon oils 1-15 wt.%. The material is suitable as a building material, esp. for pavements, roofing, sporting facility surfaces , etc.				
ST	waste rubber bitumen modifier construction material ; roofing waste rubber bitumen modifier; pavement waste rubber bitumen modifier				
IT	Sporting goods (athletic fields; polymeric bitumen modifier contg. waste diene rubber and EPDM rubber)				
IT	Synthetic rubber, uses RL: TEM (Technical or engineered material use); USES (Uses) (diene, waste; polymeric bitumen modifier contg. waste diene rubber and EPDM rubber)				
IT	Paving materials Roofing (polymeric bitumen modifier contg. waste diene rubber and EPDM rubber)				
IT	Bitumens RL: TEM (Technical or engineered material use); USES (Uses) (polymeric bitumen modifier contg. waste diene rubber and EPDM rubber)				
IT	Solid wastes (rubber; polymeric bitumen modifier contg. waste diene rubber and EPDM rubber)				

IT EPDM rubber
 RL: TEM (Technical or engineered material use); USES (Uses)
 (waste; polymeric bitumen modifier contg. waste diene rubber and EPDM rubber)
 IT 9002-88-4, Polyethylene
 RL: TEM (Technical or engineered material use); USES (Uses)
 (rubber, waste; polymeric bitumen modifier contg. waste diene rubber and EPDM rubber)

L74 ANSWER 16 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 2000:610576 HCAPLUS

DN 133:178674

TI Synthetic surfacing material for play and sports areas

IN Blythe, Robert

PA Genshaw Ltd., UK

SO Brit. UK Pat. Appl., 23 pp.

CODEN: BAXXDU

DT Patent

LA English

IC ICM E01C013-00

ICS C08L009-06

ICI C08L009-06, C08L067-00, C08L071-00, C08L075-04, C08L077-00

CC 39-15 (Synthetic **Elastomers** and Natural **Rubber**)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2340497	A1	20000223	GB 1998-11809	19980603
PRAI	GB 1998-11809		19980603		

AB The title material is a blend of **granular thermoplastic elastomer**, esp. block SBR, and a **binder** of polyurethane. Blended polyurethane **binder** and block SBR granulate (2-6 mm) was formed into a **playground surfacing** material having wear index 0.82 g/1000 cycles, good weather resistance, and resistance to indentation (90 s load on) 3.5 mm.

ST **granular** block SBR surfacing material; urethane **binder granular rubber** surfacing material

IT Polyurethanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (binder; **granular thermoplastic elastomer**-based synthetic surfacing material for play and sports areas)

IT **Styrene-butadiene rubber**, properties

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (block, triblock, TPR 99; **granular thermoplastic elastomer**-based synthetic surfacing material for play and sports areas)

IT **Isoprene-styrene rubber**

RL: TEM (Technical or engineered material use); USES (Uses)
 (block; **granular thermoplastic elastomer**-based synthetic surfacing material for play and sports areas)

IT Synthetic **rubber**, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (butene-ethylene-styrene, block; **granular thermoplastic elastomer**-based synthetic surfacing material for play and sports)

applicant

- areas)

IT **Construction materials**
 (granular thermoplastic elastomer-based
 synthetic surfacing material for play and
 sports areas)
- IT **Ethylene-propylene rubber**
 Urethane rubber, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (granular thermoplastic elastomer-based
 synthetic surfacing material for play and
 sports areas)
- IT **Synthetic rubber, uses**
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyamide-polyether; granular thermoplastic
 elastomer-based synthetic surfacing material for
 play and sports areas)
- IT **Synthetic rubber, uses**
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyamide; granular thermoplastic
 elastomer-based synthetic surfacing material for
 play and sports areas)
- IT **Polyester rubber**
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyether-; granular thermoplastic
 elastomer-based synthetic surfacing material for
 play and sports areas)
- IT **Sporting goods**
 (sports surface; granular
 thermoplastic elastomer-based synthetic
 surfacing material for play and sports
 areas)
- IT 288376-06-7, Stobi elast S 133
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)
 (binder; granular thermoplastic
 elastomer-based synthetic surfacing material for
 play and sports areas)
- IT 9010-79-1
 RL: TEM (Technical or engineered material use); USES (Uses)
 (ethylene-propylene rubber,
 granular thermoplastic elastomer-based
 synthetic surfacing material for play and
 sports areas)
- IT 105729-79-1
 RL: TEM (Technical or engineered material use); USES (Uses)
 (isoprene-styrene rubber, block;
 granular thermoplastic elastomer-based
 synthetic surfacing material for play and
 sports areas)
- IT 106107-54-4
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)
 (styrene-butadiene rubber, block,
 triblock, TPR 99; granular thermoplastic
 elastomer-based synthetic surfacing material for
 play and sports areas)

AN 2000:741077 HCAPLUS
 DN 133:310807
 TI Sheet-like floor covering and method for its manufacture
 IN Graab, Gerhard; Rischer, Dieter; Heckel, Klaus; Heidecke, Gerhard
 PA Firma Carl Freudenberg, Germany
 SO Eur. Pat. Appl., 7 pp.
 CODEN: EPXXDW
 DT Patent
 LA German
 IC ICM E04F015-10
 ICS B29C070-64
 ICI B29K021-00
 CC 39-15 (Synthetic **Elastomers** and Natural **Rubber**)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1045084	A2	20001018	EP 2000-103853	20000224
	EP 1045084	A3	20010926		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	DE 19915729	A1	20001116	DE 1999-19915729	19990408
	NO 2000001626	A	20001009	NO 2000-1626	20000329
	CA 2304880	AA	20001008	CA 2000-2304880	20000407
	JP 2000320122	A2	20001121	JP 2000-106194	20000407
PRAI	DE 1999-19915729	A	19990408		
AB	A title covering comprising vulcanized rubber track, e.g., butadiene-styrene rubber, with decorative particles embedded into its surface is claimed. The particles are made of different, light-reflecting material, e.g., corundum, SiC or Al, and are pre-coated with a transparent coating, preferably epoxy, for improving adhesion to the rubber. Other decorative particles , e.g., rubber, are optionally also embedded in the surface of the floor covering track .				
ST	rubber floor covering track decorative surface particle ; silicon carbide decorative surface particle rubber floor covering track ; corundum decorative surface particle rubber floor covering track ; aluminum decorative surface particle rubber floor covering track ; epoxy resin coated decorative surface particle rubber floor covering				
IT	Epoxy resins, uses RL: TEM (Technical or engineered material use); USES (Uses) (coating; rubber floor covering track with epoxy-coated decorative particles embedded in rubber surface)				
IT	Coating materials Floor coverings (rubber floor covering track with epoxy-coated decorative particles embedded in rubber surface)				
IT	Styrene-butadiene rubber, uses RL: TEM (Technical or engineered material use); USES (Uses) (rubber floor covering track with epoxy-coated decorative particles embedded in rubber surface)				
IT	409-21-2, Silicon carbide, uses 1302-74-5, Corundum, uses 7429-90-5, Aluminum, uses RL: TEM (Technical or engineered material use); USES (Uses) (particles ; rubber floor covering track with epoxy-coated decorative particles embedded in rubber surface)				

IT 9003-55-8

RL: TEM (Technical or engineered material use); USES (Uses)
 (styrene-butadiene rubber, rubber floor
 covering track with epoxy-coated decorative particles
 embedded in rubber surface)

L74 ANSWER 18 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 2002-074909 [10] WPIX

CR 1999-205062 [17]; 1999-313313 [26]; 2002-279809 [32]; 2003-138145 [13]

DNN N2002-055299 DNC C2002-022210

TI Composition for e.g. pallets, pipes and fibers, comprises texturized
 fibrous material of (ligno)cellulosic material having internal fibers, and
 a chemical or chemical formulation, a liquid, or a **particulate**,
 powdered or granulated solid.

DC A81 A97 B07 C07 D13 D16 F09 G02 P13 T01 V04

IN LAGAGE, A; MEDOFF, M; LAGACE, A

PA (XYLE-N) XYLECO INC

CYC 95

PI WO 2000078127 A1 20001228 (200210)* EN 27p A01G009-02

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
 NL OA PT SD SE SL SZ TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
 DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
 LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
 SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2000056330 A 20010109 (200216) A01G009-02

US 6207729 B1 20010327 (200216) C09K011-00

BR 2000011952 A 20020312 (200226) A01G009-02

EP 1207740 A1 20020529 (200243) EN A01G009-02

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI

KR 2002019100 A 20020309 (200262) C08L097-02 <--

CN 1356867 A 20020703 (200265) A01G009-02

ADT WO 2000078127 A1 WO 2000-US17232 20000622; AU 2000056330 A AU 2000-56330
 20000622; US 6207729 B1 CIP of US 1997-961863 19971031, US 1999-337580
 19990622; BR 2000011952 A BR 2000-11952 20000622, WO 2000-US17232
 20000622; EP 1207740 A1 EP 2000-941650 20000622, WO 2000-US17232 20000622;
 KR 2002019100 A KR 2001-716443 20011221; CN 1356867 A CN 2000-809287
 20000622

FDT AU 2000056330 A Based on WO 200078127; US 6207729 B1 CIP of US 5973035; BR
 2000011952 A Based on WO 200078127; EP 1207740 A1 Based on WO 200078127

PRAI US 1999-338209 19990622; US 1999-337580 19990622; US 1997-961863
 19971031

IC ICM A01G009-02; C08L097-02; C09K011-00

ICS A01G013-00; A01N025-00; A01N025-34; A23G003-00; A61K038-43;
 C08J005-12; C08J005-13; C08J009-00; C08K005-13; C08K011-00;
 C08L009-00; C08L097-00; D02G003-00

AB WO 200078127 A UPAB: 20030224

NOVELTY - A composition, comprises a texturized fibrous material
 comprising:

(a) a (ligno)cellulosic material having internal fibers; and

(b) a chemical or chemical formulation; a liquid; or a

particulate, powdered, or granulated solid.

The cellulosic or lignocellulosic material is sheared to the extent
 that the internal fibers are substantially exposed.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a
 composite comprising:

(a) a texturized fibrous material comprising the (ligno)cellulosic

material having internal fibers;

(b) a **thermoplastic** resin; and

(c) an inorganic additive.

USE - The composite can be in the form of, for example, a pallet (e. g., an injection molded pallet), pipes, panels, decking materials, boards, housings, sheets, poles, straps, fencing, members, doors, shutters, awnings, shades, signs, frames, window casings, backboards, wallboards, flooring, tiles, railroad ties, forms, trays, tool handles, stalls, bedding, dispensers, staves, films, wraps, totes, barrels, boxes, packing materials, baskets, straps, slips, racks, casings, binders, dividers, walls, indoor and outdoor carpets, rugs, wovens, and mats, frames, bookcases, sculptures, chairs, tables, desks, art, toys, games, wharves, piers, boats, masts, pollution control products, septic tanks, automotive panels, substrates, computer housings, above-and below-ground electrical casings, furniture, picnic tables, tents, **playgrounds**, benches, shelters, **sporting** goods, beds, bedpans, thread, filament, cloth, plaques, trays, hangers, servers, pools, insulation, caskets, bookcovers, clothes, canes, crutches, and other construction, agricultural, material handling, transportation, automotive, industrial, environmental, naval, electrical, electronic, recreational, medical, textile, and consumer products. The composites can also be in the form of a fiber, filament, or film.

ADVANTAGE - The texturized fibrous materials have absorbent properties (so can be used for pollution control) and are generally biodegradable (so can be used for drug or chemical delivery). The fibers are strong, lightweight and inexpensive. Raw materials may be drawn from virgin or recycled materials.

Dwg.0/5

FS CPI EPI GMPI

FA AB; DCN

MC CPI: A08-R01; A12-B03; A12-W06; B04-A09F; B04-C02A; B04-C03; B04-L01; B05-A01B; B05-B02C; B05-C06; B11-C04; B12-M02D; C04-A09F; C04-C02A; C04-C03; C04-L01; C05-A01B; C05-B02C; C05-C06; C11-C04; C12-M02D; D03-H; D05-A02; D05-A04; F05-A06B; F05-A06C; G02-A05; G02-A05C
EPI: T01-L02B; V04-S09

L74 ANSWER 19 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 2000-148744 [14] WPIX

DNC C2000-046802

TI Spreadable elastic **floor** covering material for **playing areas**, running **tracks** and **sports** stadiums has rubber **particles** in polyurethane foam.

DC A93 Q41 Q45

IN KATAYAMA, H; KOBAYASHI, K; SAKAGUCHI, H; SUOH, I

PA (MITK) MITSUI-TOATSU CONSTR MATERIALS INC; (TOSP-N) TOYO SPORTS FACILITIES INC; (MITA) MITSUI CHEM INC; (TOSP-N) TOYO SPORTS SHISETSU KK

CYC 3

PI	DE 19934743	A1	20000203 (200014)*	8p	D06N007-02	
	JP 2000044789	A	20000215 (200019)	9p	C08L075-04	<--
	CN 1243137	A	20000202 (200025)		C08L075-04	<--
	JP 3343078	B2	20021111 (200280)	8p	C08L075-04	<--

ADT DE 19934743 A1 DE 1999-19934743 19990723; JP 2000044789 A JP 1998-214077 19980729; CN 1243137 A CN 1999-110546 19990729; JP 3343078 B2 JP 1998-214077 19980729

FDT JP 3343078 B2 Previous Publ. JP 2000044789

PRAI JP 1998-214077 19980729

IC ICM **C08L075-04**; D06N007-02

ICS C08G018-10; **C08L023-16**; E01C007-00; **E01C013-00**;

E01C013-06

ICA E04F015-12

AB DE 19934743 A UPAB: 20000320

NOVELTY - The material comprises a rubber powder with **particles** of not more than 1mm in a foamed polyurethane material having with mainly closed cells, an expansion ratio of 1.05-3 and a density of 0.4-1.2g/cu cm. The foam is based on a urethane prepolymer with isocyanate end groups, hardener, catalyst, organic filler and other additives with a silicone surface tension agent and a mechanically dispersed gas.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are made for: a) laying the claimed elastic floor covering onto a floor as a final layer; b) spreading the material onto a floor to form a substrate for an existing polyurethane floor covering material.

USE - For **sports areas**, e.g. **tennis courts**, running **tracks**, school yards and university **grounds**.

ADVANTAGE - The material is economical and has good damping and running characteristics.

Dwg.0/0

FS CPI GMPI

FA AB

MC CPI: A06-A00B; A08-S07; A12-F01A; A12-R03; A12-S02

L74 ANSWER 20 OF 95 RAPRA COPYRIGHT 2003 RAPRA

AN R:781371 RAPRA FS Rapra Abstracts

TI IMPACT ABSORBING MACADAM.

IN Spendlove P D

PI US 6043302 A1 20000328

AI US 1998-973316 19980323

PRAI GB 1995-11162 19950526

DT Patent

LA English

IC ICM C08K0050100501

AB This comprises 10 to 75% (preferably 25 to 45%) of a particulate rubber having a **particle** size of up to 40 mm, 25 to 90% (preferably 45 to 65%) of an aggregate having a **particle** size of up to 40 mm and from 5 to 9% of a polymer modified bituminous **binder**. Typically such a macadam has a void volume, interconnected or unconnected, of from 5 to 25%. The polymer, which modifies the bituminous **binder**, is preferably an unbranched **styrene butadiene styrene** block copolymer forming about 7% of the modified **binder**. The macadam is suitable as a base for sports pitches and athletic tracks without a rubber shock pad overlay.

CC 42C21D11C21; 53HP; 6R1

CT AGGREGATE; **BINDER**; BLOCK COPOLYMER; **BUTADIENE-STYRENE COPOLYMER**; COMPANIES; COMPANY; ELASTOMER; IMPACT PROPERTIES; MECHANICAL PROPERTIES; MODIFIED; **PARTICLE SIZE**; PARTICULATE; PROPERTIES; ROAD; RUBBER; SBR; SBS; **SPORTS SURFACE**; **STYRENE-BUTADIENE-STYRENE BLOCK COPOLYMER**; TECHNICAL; VOID VOLUME

NPT BITUMEN

GT EUROPEAN COMMUNITY; EUROPEAN UNION; UK; USA; WESTERN EUROPE

L74 ANSWER 21 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 2000-072908 [06] WPIX

DNN N2000-056960 DNC C2000-021021

TI Construction materials for wearing **course** e.g. children's **play areas**, **athletics** and horse riding.

DC A18 A23 A25 A93 Q41
 IN BLYTHE, R
 PA (GENS-N) GENSHAW LTD; (SOVE-N) SOVEREIGN RUBBER LTD
 CYC 22
 PI WO 9963162 A1 19991209 (200006)* EN 26p E01C013-06 <--
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
 W: AU CA US
 GB 2340497 A 20000223 (200013) E01C013-00 <--
 AU 9940498 A 19991220 (200021) E01C013-06 <--
 EP 1000199 A1 20000517 (200028) EN E01C013-06 <--
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
 GB 2340497 B 20030108 (200305) E01C013-00 <--
 ADT WO 9963162 A1 WO 1999-GB1456 19990526; GB 2340497 A GB 1998-11809
 19980603; AU 9940498 A AU 1999-40498 19990526; EP 1000199 A1 EP
 1999-923733 19990526, WO 1999-GB1456 19990526; GB 2340497 B GB 1998-11809
 19980603
 FDT AU 9940498 A Based on WO 9963162; EP 1000199 A1 Based on WO 9963162
 PRAI GB 1998-11809 19980603
 IC ICM E01C013-00; E01C013-06
 ICA C08L009-06
 ICI C08L067:00, C08L071:00, C08L075:04, C08L077:00
 AB WO 9963162 A UPAB: 20000203
 NOVELTY - Construction material comprises an agglomerate of
granules of a thermoplastic elastomer (TPE).
 USE - The construction material is used for wearing **course**,
 e.g. children's **play areas, athletics** and
 other games, and horse riding.
 ADVANTAGE - The invention fully meets the playground equipment
 intended for permanent installations outdoors (BS 5696). It has an
 improved use efficiency, resistance to high concentrations of ultra violet
 light and ozone. Bright colors can be obtained at no extra cost.
 On-specification polymer can be used. Dust produced in the granulation
 process is recyclable into its own color formation. The constructions are
 recyclable.
 Dwg.0/0
 FS CPI GMPI
 FA AB
 MC CPI: A12-F01A; A12-R01A

L74 ANSWER 22 OF 95 WPIX (C) 2003 THOMSON DERWENT
 AN 1999-277683 [23] WPIX
 CR 1999-193177 [17]
 DNN N1999-208108
 TI Synthetic surface for recreational or exercise use, especially for
equestrian use - surface.
 DC P36 Q41
 IN COLLINS, M A; COLLINS, M
 PA (COLL-N) COLLINS ENTERPRISES LTD MARTIN; (COLL-I) COLLINS M
 CYC 83
 PI WO 9919567 A1 19990422 (199923)* EN 14p E01C013-06 <--
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
 OA PT SD SE SZ UG ZW
 W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD
 GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
 MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA
 UG US UZ VN YU ZW
 GB 2331756 A 19990602 (199924) E01C013-06 <--
 AU 9893607 A 19990503 (199937) E01C013-06 <--

ADT WO 9919567 A1 WO 1998-GB3047 19981009; GB 2331756 A GB 1997-25180
19971128; AU 9893607 A AU 1998-93607 19981009

FDT AU 9893607 A Based on WO 9919567

PRAI GB 1997-25180 19971128; GB 1997-21643 19971010

IC ICM E01C013-06

ICS A63K001-00; E01C021-00

AB WO 9919567 A UPAB: 19990616

NOVELTY - The method comprises mixing a heated wax with a **particulate** filler and a resilient **granular** plastics component to form a uniform mix, and then applying the mix to a substrate to form a surface. POLYMERS - The rubber component of the elasticated fibre may be derived from a variety of sources. These include natural rubber, with or without carbon black and other additives or fillers. A wide range of synthetic rubbers may be used. These included **styrene butadiene** rubber, with or without natural rubber or polybutadiene and polybutadiene itself, polychloroprene, nitrile butadiene rubber, butyl and halo-butyl rubbers (copolymers of isobutylene with small amounts of isoprene), **ethylene propylene** copolymers or terpolymers and the like.

USE - Synthetic surface for recreational or exercise use by animals or humans, e.g. for equestrian use.

ADVANTAGE - The surface has a uniform consistency, and enhanced bounce which improves riding performance and comfort. It has reduced water retention and improved durability and hence prolonged working life. For example, in dry weather, there is no need to rewater the surface. It has compaction which avoids undue penetration and it does not harden, has reduced tendency to freeze in winter conditions. DESCRIPTION OF DRAWING(S) - No drawings were given.

Dwg.0/0

FS GMPI

FA AB

L74 ANSWER 23 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1999-142890 [12] WPIX

DNN N1999-103792 DNC C1999-041819

TI A surface for sport and recreation - comprises a mixture of sand, polyolefin fibres, particles and tyre fibres which are coated with a hydrocarbon wax.

DC A14 A17 A93 L02 P36

IN DICKINSON, M W

PA (DICK-I) DICKINSON M W

CYC 22

PI WO 9905218 A1 19990204 (199912)* EN 20p C08L091-06 <--

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: AU CA JP

AU 9885955 A 19990216 (199926) C08L091-06 <--

US 5961389 A 19991005 (199948) B32B005-16

ADT WO 9905218 A1 WO 1998-US15573 19980727; AU 9885955 A AU 1998-85955
19980727; US 5961389 A Provisional US 1997-53896P 19970728, US 1998-121158
19980723

FDT AU 9885955 A Based on WO 9905218

PRAI US 1998-121158 19980723; US 1997-53896P 19970728

IC ICM B32B005-16; C08L091-06

ICS A63C019-04; C09K017-50; E02D003-12

AB WO 9905218 A UPAB: 19990324

A particulate composition useful as a sport or recreational surface comprises: (a) sand (40-86 wt.%); (b) hydrocarbon wax (5-20 wt.%); and (c) a fibre, wood, particle and/or card selected from (i) 3-15 wt.% of a

polyolefin, PVC and/or wood fibre; (ii) 7.5-22.5 wt.% of a polyolefin particle; (iii) 7.5-22.5 wt.% of a tyre fibre and/or cord; (5-50 wt.%).

Also claimed are:

(1) a sport or recreational surface comprising at least a 4 inch layer of the composition (a)-(c), uniformly spread over an underlayer able to draw water away from the composition;

(2) a particulate composition for a sport or recreational surface comprising 40-65 wt.% sand; 3-15 wt.% polyolefin fibre optionally (partly) replaced by PVC fibre or wood; approx. 7.5-22.5 wt.% each of a polyolefin particle and a tyre fibre or cord; and approx. 5-17.5 wt.% hydrocarbon wax uniformly coated on the other composition ingredients; and

(3) a method for making the sport or recreational surface comprising admixing (a) and (c); heating (b) until liquified; admixing the two mixtures; cooling the resulting composition; optionally breaking the composition up into smaller particles; and depositing the cooled composition over the underlayer.

USE - The sports surface (claimed) is especially useful for **racetracks**, exercise areas, and equestrian rings for horses and ponies, or in jogging tracts, paths or running areas.

ADVANTAGE - The surface is stable, water-resistant, easily drained, easy to manufacture, and resistant to compaction yet resilient enough to provide a cushion.

Dwg.0/0

FS CPI GMPI

FA AB

MC CPI: A11-C03; A12-F01A; A12-T01D; L02-D09

L74 ANSWER 24 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1999-253448 [21] WPIX

CR 1998-413636 [35]

DNN N1999-188632 DNC C1999-074008

TI Nasal dilator useful as a treatment for relief of symptoms associated with the common cold or allergies.

DC G04 P32 P34 P35

IN DARNER, J A; DESAI, K J; MCCORMICK, B J; MITRA, S; SIMONE, M J

PA (PROC) PROCTER & GAMBLE CO

CYC 1

PI US 5890486 A 19990406 (199921)* 19p A61F005-08

ADT US 5890486 A Cont of US 1996-771192 19961220, CIP of US 1997-955877 19971022, US 1998-108681 19980701

PRAI US 1998-108681 19980701; US 1996-771192 19961220; US 1997-955877 19971022

IC ICM A61F005-08

ICS A61M015-00; A61M016-00; A62B007-00

AB US 5890486 A UPAB: 19990603

NOVELTY - A nasal dilator comprising means for dilating congested and/or blocked nasal passages and thermal element(s) to relieve sinus discomfort and pain and other cold/allergy symptoms.

DETAILED DESCRIPTION - A nasal dilator comprising a unitary truss member having an elongated shape and a normally, substantially planar state, comprising: (a) a strip of flexible base material having 2 sides, 2 end regions adapted to fit over first and second nasal passages, an intermediate segment coupling the 2 end regions and configured to traverse a portion of a nose located between the 2 nasal passages, and a layer of adhesive substance which extends over the 2 end regions of the first side of the base material to releasably engage the 2 end regions with outer wall tissue of the 2 nasal passages; (b) a resilient means extending along the unitary truss member and oriented substantially parallel to a

longitudinal extent thereof; (c) thermal element(s); and (d) a strip of flexible top material having 2 sides, the second of which is fixedly attached around its periphery to the periphery of the second side of the strip of flexible base material such that thermal element(s) are sealed between the strips of base material and top material; wherein the inherent tendency of the unitary truss member is to return to its normally planar state when flexed to engage the outer wall tissue of the nasal passages so as to pull the outer wall tissue outward. An INDEPENDENT CLAIM is also included for a treatment for relief of symptoms associated with the common cold or allergies comprising nasal discharge, nasal congestion and blockage, sneezing, mild burning of the eyes, loss of smell and taste, feeling of pressure or fullness in the sinuses, sinus pain, headache and vocal impairment by applying the above nasal dilator to the nose.

USE - The nasal dilator is useful as a treatment for relief of symptoms associated with the common cold or allergies as detailed above.

ADVANTAGE - The nasal dilator can be safely and comfortably worn on the nose for an extended period of time.

Dwg.0/8

FS CPI GMPI

FA AB

MC CPI: G04-B

L74 ANSWER 25 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1999-555354 [47] WPIX

DNN N1999-411235 DNC C1999-162656

TI Compact for elastic pavement, e.g. racecourse and horse training area - has surface layer and sub-layer made of soft elastic aggregates and large pile aggregates, respectively, which together have predefined thickness and apparent specific gravity.

DC A86 A93 L02 P14 Q41

IN ISHIKAWA, M; KUMAMOTO, Y; NONOMURA, A; OTAKURA, S; OTANI, K; SUGA, T; TSUURA, T

PA (SUMR) SUMITOMO RUBBER IND LTD; (KAOS) KAO CORP

CYC 2

PI JP 11241303 A 19990907 (199947)* 6p E01C007-08

US 2001040016 A1 20011115 (200172) D21J003-00

ADT JP 11241303 A JP 1998-40597 19980223; US 2001040016 A1 Div ex WO 1999-JP775 19990222, Div ex US 2000-622043 20001010, US 2001-885982 20010622

PRAI JP 1998-40597 19980223; JP 1998-40697 19980223; JP 1998-40699 19980223; JP 1998-186768 19980529; JP 1998-262970 19980917; JP 1998-275256 19980929; JP 1998-373716 19981228; JP 1998-373717 19981228; JP 1999-29290 19990205

IC ICM D21J003-00; E01C007-08

ICS A01K001-015; D21F013-00; E01C013-00

AB JP 11241303 A UPAB: 19991116

NOVELTY - A surface layer (1) of thickness 15 mm or more is formed by bonding a soft elastic aggregate using a **binder**. A sublayer (2) formed of large pile aggregates of higher specific gravity than the soft elastic aggregates is laminated on the surface layer. The entire thickness is 50 mm or more, and the apparent specific gravity of the compact is 1.1 or more.

USE - For paving racecourses and horse training areas.

ADVANTAGE - Construction work is simplified, thereby increasing durability and comfort. Protects foot of horse by preventing time-dependent bending of pavement.

DESCRIPTION OF DRAWING - The figure is an isometric view of a compact for elastic pavement. (1) Surface layer; (2) Sublayer.

Dwg.1/1

FS CPI GMPI

FA AB; GI

MC CPI: A12-F01A; A12-R09; L02-D09

L74 ANSWER 26 OF 95 RAPRA COPYRIGHT 2003 RAPRA
 AN R:768756 RAPRA FS Rapra Abstracts
 TI COMPOUNDS: M.A. HANNA BACKS CABLES.
 AU Palasset E
 SO Revue Generale des Caoutchoucs et Plastiques 76, No.782, Dec.1999, p.41/3
 ISSN: 1154-1105
 CODEN: RCPLA5
 PY 1999
 DT Journal
 LA French
 AB The polymer compounding activities of M.A. Hanna are examined, with particular reference to the production of halogen-free flame retardant cable insulation compounds in Germany where the Group has invested 10 million dollars in doubling its annual production capacity to 20,000 tonnes. Turnover and employment figures are presented for the Group.
 CC 06; 621; 6E1; 813; 968
 SC *QF; CB; OG; SB; UH
 CT ADDITIVE; APPLICATION; BUILDING APPLICATION; CABLE; CABLE INSULATION; CAPACITY; CHEMICAL RESISTANCE; COLOR CONCENTRATE; COLORANT; COLOUR CONCENTRATE; COLOURANT; COMMERCIAL INFORMATION; COMPANIES; COMPANY; COMPOUND; COMPOUNDING; CROSSLINKABLE; CUSTOM COMPOUNDING; DATA; ECONOMIC INFORMATION; **ELASTOMER**; ELECTRICAL APPLICATION; ELECTRICAL INSULATION; ELECTRICAL PROPERTIES; EMPLOYMENT; ENGINEERING APPLICATION; ENGINEERING PLASTIC; EPDM; EPM; **ETHYLENE-PROPYLENE COPOLYMER**; **ETHYLENE-PROPYLENE-DIENE TERPOLYMER**; EXTRUDING; EXTRUSION; EXTRUSION COMPOUNDING; EXTRUSION MIXING; FILM; FILMS; FINANCE; FLAME PROOFING; FLAME RETARDANCE; FLAME RETARDANT; FLAMMABILITY; FLOOR; FLOORING; **GRANULE**; HALOGEN-FREE; INSULATION; INVESTMENT; LOW EMISSION; LOW SMOKE; MATERIAL REPLACEMENT; MATERIALS SUBSTITUTION; MIXING; MOLDING COMPOUND; MOULDING COMPOUND; OIL RESISTANCE; OIL RESISTANT; PE; PIGMENT; PIPE; PLANT; PLASTIC; POLYETHYLENE; POLYPROPENE; POLYPROPYLENE; POLYVINYL CHLORIDE; PP; PRODUCT; PRODUCTION CAPACITY; PVC; RESEARCH; **RUBBER**; SEMI-FINISHED PRODUCT; SHEET; SMOKE EMISSION; SMOKE GENERATION; **SPORTS SURFACE**; TECHNICAL; TELECOMMUNICATION; **THERMOPLASTIC**; **THERMOPLASTIC ELASTOMER**; **THERMOPLASTIC RUBBER**; TUBE; TURNOVER
 SHR ELECTRIC CABLES, plastics, **rubbers**, compounding, company information, flammability; MOULDING COMPOUNDS, company information, plastics, **rubbers**; FLAMMABILITY, electric cables, plastics, **rubbers**; COMPOUNDING, plastics, electric cables, **rubbers**, company information; COMPANY INFORMATION, Hanna, compounding, moulding compounds, electric cables
 CO HANNA M.A.,CO.; WILSON COLOR; MELOS CARL BOSCH; SO.F.TER SPA; ECC A/S
 GT EUROPEAN COMMUNITY; EUROPEAN UNION; GERMANY; USA; WESTERN EUROPE; WESTERN EUROPE-GENERAL; WORLD

L74 ANSWER 27 OF 95 WPIX (C) 2003 THOMSON DERWENT
 AN 1998-416614 [36] WPIX
 DNN N1998-324406 DNC C1998-125830
 TI Surfacing material, for horticultural use, in multi-sport applications, and on roads - has mixture of recycled rubber in form of hard **granules**, or **ethylene propylene diene terpolymer granules**, and stone, granite, e.t.c aggregate. and

urethane pre-polymer.

DC A93 Q41

IN CHANT, R B; DORMAN, M J

PA (CHAN-I) CHANT R B; (DORM-I) DORMAN M J

CYC 1

PI GB 2322397 A 19980826 (199836)* 10p E01C007-35

GB 2322397 B 20000628 (200033) E01C007-35

ADT GB 2322397 A GB 1997-3623 19970221; GB 2322397 B GB 1997-3623 19970221

PRAI GB 1997-3623 19970221

IC ICM E01C007-35

ICS E01C013-06; E01C015-00

AB GB 2322397 A UPAB: 19981210

The surfacing material comprises a mixture made up of a surfacing material comprising a mixture made up of: 1) re-cycled rubber in the form of **granules** having a size in the range dust to 8 mm or an **ethylene propylene diene terpolymer** in the form of **granules** having a size in the range dust to 5 mm; 2) aggregate, such as stone, granite, glass or sand, in the form of **granules** having a **particle** size in the range dust to at least 15 mm; 3) a urethane pre-polymer.

USE - For pathways, and in multi-**sports surfaces** where body impacts need to be cushioned. Also in horticultural nursery beds where water falling on the surface passes into the body of the material until it reaches the impervious backing. May also be used in roads where signs on it are readily visible at night.

ADVANTAGE - Good resistance to cracking, provides good degree of flexibility.

Dwg.1/2

FS CPI GMPI

FA AB; GI

MC CPI: A04-G06; A05-G01E; A07-A04E; A12-R09

L74 ANSWER 28 OF 95 RAPRA COPYRIGHT 2003 RAPRA

AN R:692838 RAPRA FS Rapra Abstracts

TI WHAT'S NEW WITH GROUND RUBBER?

AU Blumenthal M (Scrap Tire Management Council)

SO BioCycle Journal of Composting & Recycling 39, No.3, March 1998, p.40/4

ISSN: 0276-5055

PY 1998

DT Journal

LA English

AB In 1997, the number of scrap tyres going to end-use markets reached 210 million out of 266 million scrap tyres generated. The three major markets for scrap tyres are tyre-derived fuel, civil engineering applications and ground rubber applications. Overall, US market demand for ground rubber has increased from around 160 million pounds of size reduced rubber sold in 1992 to some 440 million pounds sold in 1996. The use of ground rubber in new tyre manufacturing and in playground applications is discussed.

CC 176; 6T1; 8.13

SC *CO; QR; SN

CT **BINDER**; CIVIL ENGINEERING; COMPANIES; COMPANY; DATA; DEMAND; ECONOMIC INFORMATION; ELASTOMER; ENERGY CONSERVATION; EPDM; **ETHYLENE-PROPYLENE-DIENE TERPOLYMER**; FUEL; FUEL ECONOMY; GROUND RUBBER; IMPACT PROPERTIES; LOOSE FILL; MARKET SHARE; MAT; MATTING; MECHANICAL PROPERTIES; **PARTICLE SIZE**; **PLAY SURFACE**; PROPERTIES; RECYCLED CONTENT; RECYCLING RATE; ROLLING RESISTANCE; RUBBER; RUBBERISED ASPHALT; RUBBERIZED ASPHALT; SCRAP; SCRAP TIRES; SCRAP TYRES; SERVICE LIFE; SPECIFICATION; STANDARD; STATISTICS; STOCK EXCHANGE;

- SUPPLIER; TEST METHOD; TESTING; TIRE; TRADE; TYRE; WASTE DERIVED FUEL
 SHR ECONOMIC INFORMATION, scrap tyres, recycling, USA; SCRAP TYRES, economic
 information, recycling; RECYCLING, scrap tyres, economic information;
 USA, economic information, recycling, scrap tyres
 GT USA
- L74 ANSWER 29 OF 95 RAPRA COPYRIGHT 2003 RAPRA
 AN R:689837 RAPRA FS Rapra Abstracts; Adhesives Abstracts
 TI MDI-BASED URETHANE PREPOLYMERS AS **BINDERS**.
 AU Moore D (Industrial Copolymers Ltd.)
 SO Adhesive Technology 15, No.1, March 1998, p.18-9
 PY 1998
 DT Journal
 LA English
 AB The use of granulated **rubber** crumb bound with one- or
 two-component PU **binders** has become increasingly popular in
sports and safety **surfacing**. The **rubber** crumb
granules are normally ground from scrap commercial **rubber**
 tyres, as car tyres often contain high levels of additives that make them
 unsuitable for this purpose. This process benefits the environment
 because it eliminates problems associated with the disposal of tyres. In
 the USA, many states have banned the dumping of tyres in landfill sites.
 Furthermore, it is estimated that by re-using **rubber**
granules with a polymer **binder**, energy savings of
 107,000 to 111,500 kJ/kg are achieved compared with the incineration of
 scrap tyres. **Sports** and safety **surfaces** usually
 contain more than 80% recycled product. Details are given. 4 refs.
 CC 43C6; 6A5
 SC *QB; KT
 *ADANJ
 CT ALIPHATIC; APPLICATION; **BINDER**; BUILDING APPLICATION; CASTING;
 COMPANIES; COMPANY; **CRUMB RUBBER**; CURING; PLASTIC;
 POLYURETHANE; PU; SCRAP POLYMER; SCRAP TYRES; **SPORTS SURFACE**;
 TABLES; TECHNICAL; **THERMOPLASTIC**; THERMOSET
 SHR **BINDERS**, PU, building applications; URETHANE POLYMERS,
binders, building applications; BUILDING APPLICATIONS, PU,
binders
 SHA URETHANE POLYMERS, **binders**, building applications; BUILDING
 APPLICATIONS, PU, **binders**
 GT EUROPEAN COMMUNITY; EUROPEAN UNION; UK; WESTERN EUROPE
- L74 ANSWER 30 OF 95 HCAPLUS COPYRIGHT 2003 ACS
 AN 1999:153436 HCAPLUS
 DN 130:328247
 TI A study of rutting in wearing courses on the LCPC circular fatigue test
 track
 AU Corte, Jean-Francois; Brosseaud, Yves; Kerzreho, Jean-Pierre; Spagnol, A.
 CS Laboratoire central des Ponts et Chaussees Centre de Nantes, Fr.
 SO Bulletin des Laboratoires des Ponts et Chaussees (1998), 217, 13-30
 CODEN: BLPCF6; ISSN: 1269-1496
 PB Laboratoire Central des Ponts et Chaussees
 DT Journal
 LA French
 CC 58-4 (Cement, Concrete, and Related Building Materials)
 Section cross-reference(s): 38
 AB In recent years several trials to investigate the rutting of bituminous
 mixts. used in surfaces have been carried out at the LCPC (Laboratoire
 central des Ponts et Chaussees) circular fatigue test track in Nantes.

The aim of these studies is to assess, with ref. to a straight bitumen 50/70, the **granular** skeleton of which has been made unstable by the use of crushed sand, how polymer-modified **binders**, special **binders**, hard bitumens and additives improve rutting resistance. At the same time the influence of loading conditions, such as speed and load configuration (single wide wheel or twin wheel assemblies) was examd. A heating device was also evaluated. The paper presents the results from the first three trials. It compares the results of characterization tests on the **binders** and bituminous mixts. using various lab. tests with the deformations measured on the fatigue test track and attempts to correlate the two.

- ST polymer modified bitumen asphalt rutting circular fatigue test track;
rutting asphalt bitumen characterization circular fatigue test track
- IT **Styrene-butadiene** rubber, uses
RL: MOA (Modifier or additive use); USES (Uses)
(asphalt modified by; characteristics of bitumens and correlation with rutting deformation in asphalt wearing **courses** on circular fatigue test **track**)
- IT Paving materials
(asphalt; characteristics of bitumens and correlation with rutting deformation in asphalt wearing **courses** on circular fatigue test **track**)
- IT Asphalt
(**binder**; characteristics of bitumens and correlation with rutting deformation in asphalt wearing **courses** on circular fatigue test **track**)
- IT Fatigue, mechanical
(characteristics of bitumens and correlation with rutting deformation in asphalt wearing **courses** on circular fatigue test **track**)
- IT Bitumens
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(characteristics of bitumens and correlation with rutting deformation in asphalt wearing **courses** on circular fatigue test **track**)
- IT Sand
RL: MOA (Modifier or additive use); USES (Uses)
(crushed, in asphalt; characteristics of bitumens and correlation with rutting deformation in asphalt wearing **courses** on circular fatigue test **track**)
- IT Testing of materials
(fatigue; characteristics of bitumens and correlation with rutting deformation in asphalt wearing **courses** on circular fatigue test **track**)
- IT Deformation (mechanical)
(rutting; characteristics of bitumens and correlation with rutting deformation in asphalt wearing **courses** on circular fatigue test **track**)
- IT 24937-78-8, Eva
RL: MOA (Modifier or additive use); USES (Uses)
(asphalt modified by; characteristics of bitumens and correlation with rutting deformation in asphalt wearing **courses** on circular fatigue test **track**)
- IT 9003-55-8
RL: MOA (Modifier or additive use); USES (Uses)
(**styrene-butadiene** rubber, asphalt modified by; characteristics of bitumens and correlation with rutting deformation in

asphalt wearing **courses** on circular fatigue test
track)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Autret, P; Bulletin de Liaison des laboratoires des Ponts et Chaussees 1988, V155, P33
- (2) Brosseaud, Y; Study of deformations in asphalt with the help of the LCPC wheel tracking rutting tester Evaluation and future prospects 1993
- (3) Corte, J; 8th International Conference on Asphalt Pavement Seattle USA 1997
- (4) Corte, J; Investigation of rutting of asphalt surface layers: Influence of binder and of configuration of axle loading 1994
- (5) Grammsammer, J; Revue generale des routes et aerodromes 1991

L74 ANSWER 31 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:809846 HCAPLUS

DN 128:49222

TI **Granular** antibacterial materials

IN Ogushi, Yoshiyuki

PA Ogushi, Yoshiyuki, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM A61L002-16

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 5, 58

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09322927	A2	19971216	JP 1996-189199	19960718
PRAI	JP 1996-81237		19960403		
AB	The title materials, useful for mixing with sand for play ground , mixing with synthetic resins to form moldings, etc., are prep'd. by mixing mortar and acrylic polymers (e.g., cyclohexyl methacrylate-styrene copolymer) and granulating.				
ST	play ground granular antibacterial material; plastic molding granular antibacterial material; acrylic polymer granular antibacterial material				
IT	Antibacterial agents Granulation Mortar (granular antibacterial materials)				
IT	Molded plastics, uses Soaps RL: ADV (Adverse effect, including toxicity); POF (Polymer in formulation); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses) (granular antibacterial materials)				
IT	Cement (construction material) (portland; granular antibacterial materials)				
IT	Cement (construction material) (white; granular antibacterial materials)				
IT	9003-53-6, Polystyrene 9003-55-8D, Butadiene-styrene copolymer, carboxy-modified 30917-98-7, Cyclohexyl methacrylate-styrene copolymer RL: ADV (Adverse effect, including toxicity); POF (Polymer in formulation); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)				

(granular antibacterial materials)

L74 ANSWER 32 OF 95 HCAPLUS COPYRIGHT 2003 ACS
 AN 1997:342398 HCAPLUS
 DN 126:320238
 TI Sprayable mortar compositions and method for spraying the material
 IN Araki, Akitoshi; Hirano, Kenkichi; Mizushima, Kazuyuki; Terashima, Isao;
 Iwasaki, Masahiro; Watanabe, Akira
 PA Denki Kagaku Kogyo K. K., Japan
 SO Eur. Pat. Appl., 35 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C04B028-02
 ICS C04B040-00
 ICI C04B028-02, C04B022-00, C04B022-14, C04B022-16
 CC 58-3 (Cement, Concrete, and Related Building Materials)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 769482	A1	19970423	EP 1996-116357	19961011
	EP 769482	B1	20011114		
	R: AT, CH, DE, FR, LI				
	TW 391950	B	20000601	TW 1996-85112354	19961009
	AT 208747	E	20011115	AT 1996-116357	19961011
	JP 09169557	A2	19970630	JP 1996-270748	19961014
	NO 9604407	A	19970418	NO 1996-4407	19961016
	CN 1154347	A	19970716	CN 1996-122864	19961017
	CN 1083810	B	20020501		
PRAI	JP 1995-268178	A	19951017		
AB	The compns. comprise cement and gypsum as main components, and a setting accelerator comprising Ca aluminate as a main component. The compns. may be sprayed in tunnels, on roads, railways, and racetracks . The cement may contain Ca fluoroaluminate, and the setting accelerator may addnl. contain alkali metal aluminate and/or alkali metal carbonate as main components, and the compns. may contain a phosphate, amines, fibrous materials, sulfites, setting retardants, water reducing agents, SiO2 fume, and dust-suppressing agents.				
ST	sprayable mortar cement gypsum accelerator; setting retardant accelerator mortar; phosphate amine sulfite mortar; fibrous material mortar; dust suppressing plasticizer agent				
IT	Setting agents				
	(accelerators; sprayable mortar compns. contg. cement and gypsum and)				
IT	Dust				
	(agents for suppressing of; sprayable mortar compns. contg. cement and gypsum and setting accelerators and)				
IT	Aluminates				
	RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)				
	(alkali metal; sprayable mortar compns. contg. cement and gypsum and setting accelerators and)				
IT	Alkali metal oxides				
	RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)				
	(aluminum oxides; sprayable mortar compns. contg. cement and gypsum and setting accelerators and)				
IT	Aggregates				
	(coarse and fine; sprayable mortar compns. contg. cement and gypsum and				

setting accelerators and)

IT Cement (**construction material**)
(portland; sprayable mortar compns. contg. gypsum and setting
accelerator and)

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(retardants; sprayable mortar compns. contg. cement and gypsum and
setting accelerators and)

IT Setting agents
(retarders; sprayable mortar compns. contg. cement and gypsum and
setting accelerators and)

IT Fibrous materials
Plasticizers
(sprayable mortar compns. contg. cement and gypsum and setting
accelerators and)

IT Kaolin, uses
Vinal fibers
RL: MOA (Modifier or additive use); USES (Uses)
(sprayable mortar compns. contg. cement and gypsum and setting
accelerators and)

IT Amines, uses
Phosphates, uses
Sulfites
RL: MOA (Modifier or additive use); TEM (Technical or engineered material
use); USES (Uses)
(sprayable mortar compns. contg. cement and gypsum and setting
accelerators and)

IT Cement (**construction material**)
(sprayable mortar compns. contg. gypsum and setting accelerator and)

IT Mortar
(sprayable; cement, gypsum, and setting accelerator in compns. for)

IT Concrete
(sprayable; gypsum and setting accelerator in compns. for)

IT Metallic fibers
RL: MOA (Modifier or additive use); TEM (Technical or engineered material
use); USES (Uses)
(steel; sprayable mortar compns. contg. cement and gypsum and setting
accelerators and)

IT 1305-62-0, Slaked lime, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material
use); USES (Uses)
(accelerator; sprayable mortar compns. contg. cement and gypsum and
setting accelerators and)

IT 7631-86-9, Silica, uses
RL: MOA (Modifier or additive use); USES (Uses)
(amorphous, fume; sprayable mortar compns. contg. cement and gypsum and
setting accelerators and)

IT 77-92-9, Citric acid, uses
RL: MOA (Modifier or additive use); USES (Uses)
(retardant; sprayable mortar compns. contg. cement and gypsum and
setting accelerators and)

IT 12005-57-1, Aluminum calcium oxide (Al₁₄Ca₁₂O₃₃)
RL: MOA (Modifier or additive use); TEM (Technical or engineered material
use); USES (Uses)
(setting accelerator; sprayable mortar compns. contg. cement and gypsum
and)

IT 497-19-8, Sodium carbonate, uses 11138-49-1, Sodium aluminate
RL: MOA (Modifier or additive use); TEM (Technical or engineered material

use); USES (Uses)
 (setting accelerator; sprayable mortar compns. contg. cement and gypsum and setting accelerators and)

IT 463-79-6D, Carbonic acid, alkali metal salts, uses
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (setting accelerators; sprayable mortar compns. contg. cement and gypsum and setting accelerators and)

IT 15123-81-6, Metakaolin
 RL: MOA (Modifier or additive use); USES (Uses)
 (sprayable mortar compns. contg. cement and gypsum and setting accelerators and)

IT 7631-90-5, Sodium bisulfite 7681-57-4, Sodium pyrosulfite 10117-38-1, Potassium sulfite 12043-73-1, Aluminum calcium chloride oxide (Al7Ca6ClO16)
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (sprayable mortar compns. contg. cement and gypsum and setting accelerators and)

IT 13397-24-5, Gypsum, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sprayable mortar compns. contg. cement and setting accelerator and)

IT 1321-69-3, Sodium naphthalenesulfonate
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (water reducing agent; sprayable mortar compns. contg. cement and gypsum and setting accelerators and)

L74 ANSWER 33 OF 95 RAPRA COPYRIGHT 2003 RAPRA
 AN R:651206 RAPRA FS Rapra Abstracts
 TI SHOCK ABSORBING UNDERLAYMENT FOR ARTIFICIAL **PLAYING SURFACES.**
 IN Di Geronimo J W
 PI US 5605721 A 19970225
 AI US 1995-484889 19950607
 DT Patent
 LA English
 IC ICM E01C013-06
 ICS C08J009-00

AB This is composed of BR, such as polybutadiene or SBR, which is commercially available as granulised, recycled polycord tyres. An inorganic base moisture-retaining agent, such as vermiculite or perlite, is also included in the composition in addition to a **binder** composed of a mixture of isocyanate PU and an inorganic acid. The underlayment is made by thoroughly mixing the rubber and mixing the moisture-retaining component therewith followed by an acid having a pH of 3 or less and the PU. It is applied over a conventional foundation base and an artificial turf is laid over the underlayment composition.

CC 6R1; 9518
 SC *QP; UG
 CT ADDITIVE; APPLICATION; ARTIFICIAL GRASS; **BINDER**; BR; BUILDING APPLICATION; **BUTADIENE-STYRENE COPOLYMER**; DIAGRAM; ELASTOMER; **GRANULE**; IMPACT PROPERTIES; IMPACT RESISTANCE; IMPACT RESISTANT; INORGANIC; MECHANICAL PROPERTIES; MIXING; MOISTURE RETENTION; PH; PLASTIC; **PLAY SURFACE**; POLYBUTADIENE; POLYURETHANE; PU; RECYCLATE; RECYCLED; RECYCLING; RUBBER; SBR; SCRAP; SCRAP TIRES; SCRAP TYRES; TECHNICAL; THERMOSET; TIRE; TYRE; UNDERLAY

NPT ACID; ISOCYANATE; PERLITE; VERMICULITE

SHR BUILDING APPLICATIONS, **play surfaces**, impact
properties; IMPACT PROPERTIES, **play surfaces**
GT USA

L74 ANSWER 34 OF 95 JAPIO COPYRIGHT 2003 JPO
AN 1997-296409 JAPIO
TI SOFT PAVING METHOD AND BINDER USED THEREFOR
IN SEKIGUCHI HIROMICHI; SEO AKIRA; MAEDA MOTOMU
PA SHOWA SHELL SEKIYU KK
PI JP 09296409 A 19971118 Heisei
AI JP 1996-135928 (JP08135928 Heisei) 19960502
PRAI JP 1996-135928 19960502
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1997
IC ICM E01C015-00
ICS C08L057-00; C08L101-00; C09J157-00; C09J201-00
AB PROBLEM TO BE SOLVED: To obtain a pavement with a natural sense in a short
time, by laying a chipped or **granular** fibrous material on the
ground surface and scattering a binder thereon and curing it, when
executing a soft pavement like a garden, a pedestrian road, an
athletic ground, etc.
SOLUTION: Petroleum solvent extraction oil in an amount of 20-90wt.%,
10-80wt.% at least one or more petroleum resin selected from petroleum
resins made of C<SB>5</SB> and C<SB>9</SB> fractions as the raw material
and the group composed of C<SB>5</SB> and C<SB>9</SB>, 0.1-7wt.%
thermoplastic rubber, and 0.1-5wt.% maleic resin, are
emulsified with a diamine emulsifier shown in the general formula 1 to
form a binder constituted of 50-95wt.% bright cation emulsion compound.
And 5-50wt.% cement milk is added thereto. Bark, wooden chips, elastic
plastics, etc., generated from industrial wastes are laid one pavement
surfaces like a pedestrian road, a slope, a median strip, etc., by a
specified thickness with a **grain** pattern and colors to provide a
natural sense. This binder is scattered thereon to bind and cure them in a
short time. In this way, a pavement with a soft walking sense, preventing
vegetation can be obtained costlessly.
COPYRIGHT: (C)1997, JPO

L74 ANSWER 35 OF 95 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
AN 1996:333061 HCAPLUS
DN 125:60756
TI Shock absorbing underlayment for artificial **playing**
surfaces comprising butadiene rubber **particles**, inorg.
moisture-retaining agent and **binder** and its preparation
IN Di Geronimo, Joseph W.
PA Presidential Sports Systems, Inc., USA
SO U.S., 10 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C08J011-04
ICS C08K003-24; C08L009-00; E01C005-18
NCL 521042000
CC 39-9 (Synthetic **Elastomers** and Natural **Rubber**)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
✓PI	US 5514722	A	19960507	US 1994-289764	19940812
	US 5605721	A	19970225	US 1995-484889	19950607
PRAI	US 1994-289764		19940812		

- AB A shock-absorbing underlayment compn. is manufd. by thoroughly mixing 85-90% granulated recycled butadiene rubber **particles**, 1-3% inorg. moisture-retaining agent, and 8-12% **binder** mixt. of isocyanate polyurethane and inorg. acid. The compn. provides an open-cell structure that permits the entrance and exit of air and moisture, providing for glass-like traction and a cooler **playing surface**. Thus, 100 lb of recycled granulated nylon or polyester cord tire SBR rubber **particles** having a diam. of 2-6 mm were mixed thoroughly with 1 lb of each of dry vermiculite and perlite, then 3 oz of each of 20% HCl and 20% H2SO4, and finally 13.75 lb of polyisocyanate polyurethane; the resultant mixt. was spread on a foundational substrate, compressed to 12 lb/ft2, and sculpted to contours of a golf course.
- ST butadiene rubber shock absorbing underlayment compn; SBR rubber shock absorbing underlayment compn; vermiculite rubber shock absorbing underlayment compn; perlite rubber shock absorbing underlayment compn; polyurethane butadiene rubber shock absorbing underlayment; sport field shock absorbing underlayment
- IT Golf courses
Recycling of plastics and rubbers
Shock absorbers
Tires
(shock-absorbing underlayment for artificial **playing surfaces** comprising butadiene rubber **particles**, inorg. moisture-retaining agent and polyurethane/acid **binder**)
- IT Perlite
RL: MOA (Modifier or additive use); USES (Uses)
(shock-absorbing underlayment for artificial **playing surfaces** comprising butadiene rubber **particles**, inorg. moisture-retaining agent and polyurethane/acid **binder**)
- IT Rubber, butadiene, uses
Rubber, **butadiene-styrene**, uses
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(shock-absorbing underlayment for artificial **playing surfaces** comprising butadiene rubber **particles**, inorg. moisture-retaining agent and polyurethane/acid **binder**)
- IT **Sporting goods**
(artificial **playing surfaces**, shock-absorbing underlayment for artificial **playing surfaces** comprising butadiene rubber **particles**, inorg. moisture-retaining agent and polyurethane/acid **binder**)
- IT Urethane polymers, uses
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(isocyanate group-contg., shock-absorbing underlayment for artificial **playing surfaces** comprising butadiene rubber **particles**, inorg. moisture-retaining agent and polyurethane/acid **binder**)
- IT Glass, oxide
RL: MOA (Modifier or additive use); USES (Uses)
(volcanic, shock-absorbing underlayment for artificial **playing surfaces** comprising butadiene rubber **particles**, inorg. moisture-retaining agent and polyurethane/acid **binder**)
- IT 9003-17-2 9003-55-8
RL: PEP (Physical, engineering or chemical process); POF (Polymer in

formulation); TEM (Technical or engineered material use); PROC (Process);
USES (Uses)

(rubber, shock-absorbing underlayment for artificial **playing**
surfaces comprising butadiene rubber **particles**,
inorg. moisture-retaining agent and polyurethane/acid **binder**)

IT 1318-00-9, Vermiculite 7647-01-0, Hydrochloric acid, uses 7664-38-2,
Phosphoric acid, uses 7664-93-9, Sulfuric acid, uses 7697-37-2, Nitric
acid, uses 13132-95-1, Hydrated aluminum silicate
RL: MOA (Modifier or additive use); USES (Uses)

(shock-absorbing underlayment for artificial **playing**
surfaces comprising butadiene rubber **particles**,
inorg. moisture-retaining agent and polyurethane/acid **binder**)

L74 ANSWER 36 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1996-107285 [12] WPIX

DNN N1996-089822 DNC C1996-034059

TI Rubber compsn. for tyre treads having improved road friction - comprises
styrene-butadiene rubber, inorganic powder, carbon
black and opt. petroleum resin and alkyl phenol resin or opt. silica..

DC A18 A95 E11 Q11

IN IWAFUNE, S; MATSUO, K; OHTA, T; SAKIYAMA, J

PA (BRID) BRIDGESTONE CORP; (IWAF-I) IWAFUNE S; (MATS-I) MATSUO K; (OHTA-I)
OHTA T; (SAKI-I) SAKIYAMA

CYC 6

PI EP 697432 A1 19960221 (199612)* EN 18p C08K003-22

R: DE FR GB IT

JP 08059893 A 19960305 (199619) 7p C08L009-06 <--

JP 08059894 A 19960305 (199619) 9p C08L009-06 <--

US 2002169245 A1 20021114 (200277) C08K003-34

US 6489389 B1 20021203 (200301) C08L003-20 <--

JP 3366452 B2 20030114 (200308) 8p C08L009-06 <--

JP 3366453 B2 20030114 (200308) 9p C08L009-06 <--

ADT EP 697432 A1 EP 1995-305787 19950818; JP 08059893 A JP 1994-195539
19940819; JP 08059894 A JP 1994-195540 19940819; US 2002169245 A1 CIP of
US 1996-749828 19961115, US 1999-238747 19990128; US 6489389 B1 Cont of US
1995-516935 19950818, CIP of US 1996-749828 19961115, US 1999-238747
19990128; JP 3366452 B2 JP 1994-195539 19940819; JP 3366453 B2 JP
1994-195540 19940819

FDT JP 3366452 B2 Previous Publ. JP 08059893; JP 3366453 B2 Previous Publ. JP
08059894

PRAI JP 1994-195540 19940819; JP 1994-195539 19940819

REP DE 4011983; GB 674011; US 2894926; US 4522970

IC ICM C08K003-22; C08K003-34; **C08L003-20; C08L009-06**

ICS B60C001-00; C08K003-04; C08K003-36; C08K005-54; C08K007-00;

C08L003-22; C08L057-02; C08L061-14

AB EP 697432 A UPAB: 19960322

A rubber compsn. for tyre treads comprises (a) at least 70 pts. wt.
styrene-butadiene rubber having a **styrene**
content of 20-60 (pref. 30-45) wt.%, (b) 5-150 (pref. 15-120) pts. wt.
powdery inorganic cpd. of formula $mM1.xSiOy.zH2O$ (I) having a
particle size 0.01-10 μm ; (c) 5-170 (pref. 15-140) pts. wt.
carbon black having nitrogen absorption specific area 80-280 m^2/g so that
(b) +(c) is 70-200 pts. wt.; and opt. (d) 5-40 pts. wt. of at least one
9C-aromatic petroleum resin and an alkylphenol resin; or opt. (e) 5-100
(pref. 30-100) pts. wt. silica having nitrogen absorption specific area
80-280 m^2/g .

In (I), M1 is Al, Mg, Ti, Ca or any oxide or hydroxide thereof; m =
1-5; x = 0-10; y = 2-5; and z = 0-10.

USE - Used for making tyre treads for general use and also for use on wet road **surfaces** or racing **tracks**.

ADVANTAGE - The tyres produced have excellent braking performance and driving stability.

Dwg.0/1

FS CPI GMPI

FA AB; DCN

MC CPI: A04-B03; A08-R03; A08-R06B; A12-T01; E31-N04D; E31-P05A; E31-P05B; E34; E35-K02; E35-K04

L74 ANSWER 37 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1996-051241 [06] WPIX

DNC C1996-016865

TI Heat fusible **binder** for asphaltic prod. - contg. natural or petroleum bitumen and a high m.pt. hydrocarbon wax.

DC A93 H08 K07 L02

IN BERITZKI, J; NETTER, M; OVAERT, F

PA (SMAC-N) SMAC ACIEROID SA

CYC 9

PI EP 690102 A1 19960103 (199606)* FR 15p C08L095-00 <--

R: BE CH DE FR GB LI LU NL SE

FR 2721936 A1 19960105 (199609) 20p C08L095-00 <--

ADT EP 690102 A1 EP 1995-401586 19950630; FR 2721936 A1 FR 1994-8190 19940701

PRAI FR 1994-8190 19940701

REP US 3265517; US 3291767; US 3303149; WO 8705313

IC ICM **C08L095-00**

ICS B09B003-00; C04B026-26; C09K017-40; E01C007-18; E04B001-66

ICI C04B111:60; C09K103:00, C09K107:00; C08L091:06, C08L095-00; C08L023:02, C08L095-

AB EP 690102 A UPAB: 19960212

Organic **binder** for asphaltic prods. is based on natural bitumen or bitumen from the petroleum industry, esp. pigmentable bitumen or clear **binder** together with an additive comprising a hydrocarbon wax with a m.pt. (measured according to ASTM D 3945 and D 3418) of above 85 deg.C.

Pref. the wax has a m.pt. of 110-140 deg.C and is a polymethylene wax or polyolefin wax such as polyethylene, polypropylene or **ethylene-propylene** copolymer wax. The wax pref. has a penetration at 23 deg.C (ASTM D1321) of less than 15/10 mm. Pref. the wax ppts. in the **binder** at a temp. below its m.pt. The **binder** pref.

contains 2-20 (4.5-11.5) wt.% of the wax. The **binder** may also contain an elastomer, esp. a **styrene-butadiene**

copolymer, a **styrene-butadiene-styrene**

copolymer or a **styrene-isoprene-styrene**

copolymer. The asphalt compsns. contain mineral fillers such as aggregate, sand and gravel and may also contain organic fillers such as **particles** of cork or rubber.

USE - As **binders** for hot pourable asphalt compsns. comprising a bitumen based **binder** and a mineral filler, useful e.g. for forming water tight seal coats, for surfacing pathways and car parks, as soundproof backing layers e.g. for metal panels, as **flooring** for **sports grounds**, industrial **flooring**, for stabilisation of river banks, etc., for prodn. of facade panels, for encapsulation of industrial (esp. radioactive) waste to render it inert, etc.

ADVANTAGE - The **binders** give asphalt compsns. which can be laid at relatively low casting temps. and exhibit low shrinkage upon cooling and freedom from cracking at low usage temps., together with good dimensional stability at elevated temps.

Dwg.0/0
 FS CPI
 FA AB
 MC CPI: A03-C03; A12-R09; H08-E06; K07-B01; L02-D10

L74 ANSWER 38 OF 95 RAPRA COPYRIGHT 2003 RAPRA
 AN R:679073 RAPRA FS Rapra Abstracts
 TI USA AND FRANCE ARE LEADERS IN THE USE OF SCRAP TYRE REGRIND.
 SO Industria della Gomma 40, No.9, Nov.1996, p.40/4
 ISSN: 0019-7556
 CODEN: INGOAF
 PY 1996
 DT Journal
 LA Italian
 AB Applications of reclaimed **rubber** from scrap tyres are examined, with particular reference to uses in asphalt road surfacing compositions. Some developments in France and the USA are reviewed, including a recycling process developed by Roll-Gom of France, and the relative advantages of ambient and cryogenic grinding techniques are discussed.
 CC 6; 62.15; 6R1; 6T1; 8121; 8.13
 SC *OQ; QA; QP; QR; SB; SN
 CT ABRASION RESISTANCE; ACOUSTIC INSULATION; ADDITIVE; ADHESION; AGGREGATE; AGRICULTURAL TIRE; AGRICULTURAL TYRE; AIR SEPARATION; AMBIENT GRINDING; **BINDER**; BLEND; BRAKE; CAR TIRE; CAR TYRE; COMMERCIAL INFORMATION; COMPANIES; COMPANY; COMPOUNDING; COMPRESSION SET; COST; COSTS; CRYOGENIC GRINDING; DATA; DRAINAGE; ECONOMIC INFORMATION; ELASTICITY; **ELASTOMER**; EMPLOYMENT; ENERGY CONSUMPTION; FILLER; FINANCE; FLOOR; FLOORING; FRACTURE; FURNITURE; GRANULATION; GRINDER; GRINDING; **GROUND RUBBER**; HEAVY-VEHICLE TYRE; INSULATION; IRRIGATION PIPE; MACHINE; MACHINERY; MAGNETIC SEPARATION; MECHANICAL PROPERTIES; MECHANICAL RECYCLING; MIXING; NOISE INSULATION; OFF-THE-ROAD TIRE; OFF-THE-ROAD TYRE; OIL ABSORPTION; **PARTICLE SIZE**; PASSENGER TIRE; PASSENGER TYRE; PIPE; PLASTIC; POLYMERIC FILLER; POST; PROPERTIES; PURITY; RECLAIM; **RECLAIMED RUBBER**; RECYCLING; REGRIND; REPROCESSING; ROAD SIGN; ROAD SURFACE; **RUBBER**; **RUBBERISED ASPHALT**; **RUBBERISED BITUMEN**; **RUBBERIZED ASPHALT**; **RUBBERIZED BITUMEN**; SCRAP; SCRAP TIRES; SCRAP TYRES; SIGN; SOUND INSULATION; **SPORTS SURFACE**; STEEL CORD; STEEL-BELTED; TARPAULIN; TECHNICAL; TEMPERATURE; **TENNIS COURT**; **THERMOPLASTIC**; TIRE; TIRE CORD; TRUCK TIRE; TRUCK TYRE; TURNOVER; TYRE; TYRE CORD; VULCANISATE; VULCANISATION; VULCANIZATE; VULCANIZATION; WASTE; WASTE SEPARATION; WATER PIPE; WEAR RESISTANCE; WEAR RESISTANT; WHEEL
 NPT AROMATIC OIL; ASPHALT; BITUMEN; LIQUID NITROGEN; OIL; OILS
 SHR RECLAIMING, **rubbers**, tyres, scrap tyres; RECLAIMED **RUBBER**, roads, applications; ROADS, **rubbers**, reclaimed **rubber**, asphalt; ASPHALT, roads; GRINDING, **rubbers**, scrap tyres, tyres; TYRES, reclaiming, grinding; SCRAP TYRES, reclaiming, grinding
 CO BELGIUM,CENTRE DE RECHERCHES ROUTIERES; ROLL-GOM
 GT BELGIUM; EUROPEAN COMMUNITY; EUROPEAN UNION; FRANCE; USA; WESTERN EUROPE

L74 ANSWER 39 OF 95 RAPRA COPYRIGHT 2003 RAPRA
 AN R:578171 RAPRA FS Rapra Abstracts
 TI **RUBBER** FINES RECLAIMED IN CALENDERED SHEET.
 SO British Plastics and Rubber Jan.1996, p.33
 ISSN: 0307-6164
 PY 1996

DT Journal
 LA English
 AB It is briefly reported that reclaimed **rubber** fines are being used in a calendered sheet material being produced by Rosehill Polymers for a range of applications including bridge decking, flat roof membranes and acoustic insulation in cars. The new process allows the reclamation of **rubber** fines which are generated in processes such as tyre retreading, but not reclaimed because they soak up too much **binder**. Rosehill's process combines the fines with a **thermoplastic**, which may itself be reclaimed material, in an internal mixer to form a dough which is extruded, cooled, pelletised and then calendered into sheet.

CC 62.15; 872; 625
 SC *OQ; OJ; SH
 CT ACOUSTIC INSULATION; AUTOMOTIVE APPLICATION; **BINDER**; BRIDGE DECK; CALENDERING; CARPET BACKING; COMPANY; **CRUMB RUBBER**; DATA; **ELASTOMER**; EXTRUSION; FINES; FLAT ROOF; FUNDING; INTERNAL MIXER; LENGTH; MACHINERY; MEMBRANE; **PARTICLE SIZE**; PELLETISING; PIPE; PLASTIC; **PLAY SURFACE**; PROTECTION; RECYCLED CONTENT; RETREADING; ROAD BARRIER; **RUBBER**; **SCRAP RUBBER**; SHEET; SHORT ITEM; **THERMOPLASTIC**; THICKNESS; TILE; TYRE; TIRE

SHR SCRAP POLYMERS, **rubbers**, sheeting; SHEETING, scrap **rubbers**, calendering; CALENDERING, scrap **rubbers**, sheeting

CO ROSEHILL POLYMERS LTD.
 GT EUROPEAN COMMUNITY; EUROPEAN UNION; UK; WESTERN EUROPE

L74 ANSWER 40 OF 95 RAPRA COPYRIGHT 2003 RAPRA
 AN R:827848 RAPRA FS Rapra Abstracts
 TI USE OF RECYCLED RUBBER AS AN IMPACT ABSORBING MEDIUM IN ASPHALT.
 AU Spendlove P
 CS Sports Advancement & Research Co.Ltd.
 SO RUBBER IN THE ENVIRONMENTAL AGE - PROGRESS IN RECYCLING. Proceedings of a one-day seminar held Shawbury, 18th November 1996
 Editor(s): Rapra Technology Ltd.
 Shawbury, 1996, paper 4. pp.3. 012

PY 1996
 DT Conference Article
 LA English
 AB Details are given of Sartek, (Sports Aggregate Rubber Technology), and its use in synthetic **sports surfaces**. Sartek is an impact absorbing asphalt which is homogeneous in nature and contains a continuous elastic phase. By replacing a percentage of the aggregate with a large **granule** rubber and using an elastic bitumen as a **binder**, a shock absorbing product is obtained. When subjected to stress, deformation of the rubber occurs, and release of stress allows the rubber to return to its natural state. In either tension or compression, the rubber pushes or pulls the elastic bitumen to which it is linked, thereby obtaining the properties claimed. Though not confined exclusively to the use of scrap truck tyres, calculations given are based on their use. The **binder** is a **styrene-butadiene-styrene** block copolymer bitumen, added at around 8% by weight to the mix. Further applications in addition to **sports surfaces** are being investigated.

CC 6R1; 62.12
 SC *QP; ON
 CT **BINDER**; CIVIL ENGINEERING; COMPANIES; COMPANY; DATA; ELASTOMER; ENERGY ABSORPTION; HEAVY VEHICLE TYRE; HOCKEY; IMPACT PROPERTIES; IMPACT RESISTANCE; IMPACT RESISTANT; MECHANICAL PROPERTIES; NOISE REDUCTION;

OVERLAY; PATENT; PLAYGROUND; PRODUCT ANNOUNCEMENT; RECLAIMED RUBBER;
 RESEARCH; RUBBER; RUBBER PHASE; RUBBERISED ASPHALT; RUBBERISED BITUMEN;
 RUBBERIZED ASPHALT; RUBBERIZED BITUMEN; SBS; SCRAP; SCRAP TIRES; SCRAP
 TYRES; SPECIFICATION; **SPORTS SURFACE**; STANDARD; STRESS;
 STRESSES; **STYRENE-BUTADIENE-STYRENE BLOCK COPOLYMER**; TABLES;
 TECHNICAL; TEST METHOD; TESTING; TIRE; TRUCK TIRE; TRUCK TYRE; TYRE
 SHR SCRAP TYRES, rubberised asphalt, **sports surfaces**;
SPORTS SURFACES, rubberised asphalt, scrap tyres
 GT EUROPEAN COMMUNITY; EUROPEAN UNION; UK; WESTERN EUROPE
 TN SARTEK; SARTEK 10/40; SARTEK 5/25

L74 ANSWER 41 OF 95 HCAPLUS COPYRIGHT 2003 ACS
 AN 1995:997339 HCAPLUS
 DN 124:125193
 TI Method and sprayable compositions for treating recreational surfaces, and
 the treated surfaces obtained
 IN Crawford, Robert Murray
 PA Baclow Gardens Pty. Ltd., Australia
 SO PCT Int. Appl., 17 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C09D107-00
 ICS C09D109-00; C09D123-16; C09D123-22; C09D125-08; C09D125-10;
 E01C007-35; E01C013-00; E01C013-06
 CC 58-5 (Cement, Concrete, and Related Building Materials)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9528451	A1	19951026	WO 1995-AU211	19950413
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA, US				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9522094	A1	19951110	AU 1995-22094	19950413
	AU 699250	B2	19981126		
	EP 756613	A1	19970205	EP 1995-915072	19950413
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	BR 9507375	A	19970930	BR 1995-7375	19950413
	JP 09512205	T2	19971209	JP 1995-526566	19950413
PRAI	AU 1994-5109		19940415		
	WO 1995-AU211		19950413		
AB	The method comprises combining a particulate surface material with a sprayable compn. in an amt. sufficient, e.g., 0.2-5 L/m ² surface area, to bind the surface material. The compns. consist of a synthetic polymer dispersed or dissolved in a fluid oil component. The polymer is selected from natural and synthetic rubber, olefins, copolymers of olefins, polyolefins, copolymers of polyolefins, and their mixts. The oil component is petroleum-based. The compns. are mixed in-situ with the particulate surface material. An ethylene-propylene copolymer (ethylene content 50%) was mixed with a petroleum-based oil (viscosity .apprx.100 cSt at 40.degree.) in wt.ratio 1:1 and the mixt. heated at 170.degree. to give a soln. having viscosity 2600 cSt. The dry sand surface of a race track for horses was sprayed with the soln. at 1 L/m ² , the surface				

material was mixed with the soln. by harrowing to a depth of 75 mm, and then compacted by rolling. The treated surface was substantially water-resistant, exhibited a considerable amt. of cushioning, aeration, and resilience, and did not form agglomerates.

- ST soil stabilization oil polymer soln; petroleum **ethylene propylene** polymer soln; race track sand soil stabilization; golf course bunker soil stabilization
- IT Golf courses
 - (bunkers; method and sprayable petroleum-polymer solns. for treating recreational surfaces, esp. golf **course** bunkers and race **track surfaces**)
- IT Antioxidants
 - Coating materials
 - Pigments
 - Soil stabilization
 - (method and sprayable petroleum-polymer solns. for treating recreational surfaces, esp. golf **course** bunkers and race **track surfaces**)
- IT Petroleum
 - Rubber, natural, uses
 - Rubber, synthetic
 - Sand
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (method and sprayable petroleum-polymer solns. for treating recreational surfaces, esp. golf **course** bunkers and race **track surfaces**)
- IT Light stabilizers
 - (UV, method and sprayable petroleum-polymer solns. for treating recreational surfaces, esp. golf **course** bunkers and race **track surfaces**)
- IT **Sporting goods**
 - (**horse-riding surfaces**, method and sprayable petroleum-polymer solns. for treating recreational surfaces, esp. golf **course** bunkers and race **track surfaces**)
- IT Alkadienes
 - Alkenes, uses
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (polymers, method and sprayable petroleum-polymer solns. for treating recreational surfaces, esp. golf **course** bunkers and race **track surfaces**)
- IT 9003-27-4, Polyisobutylene 9003-55-8, **Butadiene-styrene** copolymer 9010-79-1, **Ethylene-propylene** copolymer 39410-01-0, Butylene-styrene copolymer
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (method and sprayable petroleum-polymer solns. for treating recreational surfaces, esp. golf **course** bunkers and race **track surfaces**)

L74 ANSWER 42 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1995:960276 HCAPLUS

DN 123:342215

TI Hoof leveling and balancing compound, hoof patch and custom contoured hoof pad

IN LaRoche, Ronald L.; Mahoney, Matthew P.; Filipelli, John

PA Equitechnology, Inc., USA

SO PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DT Patent

LA English
 IC ICM A01L015-00
 ICS A01L005-00; A01L001-00; C08K003-04; C08K003-40; C08L007-00;
 C08L033-08

CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9522252	A1	19950824	WO 1995-US2144	19950221
	W: AU, BR, CA, JP, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9518799	A1	19950904	AU 1995-18799	19950221
PRAI	US 1994-198937		19940218		
	WO 1995-US2144		19950221		
AB	A compd. for bonding to a horse's hoof comprises particulate compd. comprising at least a 1st ground-up polymer, e.g. preferably Estane rubber , and an adhesive compd., e.g. preferably cyanoacrylate-based adhesive. Leveling a hoof comprises the steps of cleaning the bottom of the hoof to remove impurities, applying an adhesive bonding agent to all voids in the hoof and lowering the hoof (with bonding agent) into a ground-up polymer or polymers, such that the loose particles with the bonding agent fill all voids in the hoof. A shoe constructed from the hoof repair compd. also is disclosed.				
ST	urethane rubber hoof leveling compd; cyanoacrylate adhesive hoof leveling compd; hoof leveling compd; repair compd hoof; patch compd hoof; horse shoe rubber compd; thermoplastic urethane elastomer hoof leveling compd				
IT	Adhesives (cyanoacrylate-based; hoof leveling and balancing compd., hoof patch and custom contoured hoof pad)				
IT	Horse (ground-up rubber in cyanoacrylate-based adhesive in hoof leveling and balancing compd., hoof patch and custom contoured hoof pad, and shoes for)				
IT	Rubber , urethane, uses RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses) (ground-up; hoof leveling and balancing compd., hoof patch and custom contoured hoof pad)				
IT	Hoof (leveling compd., ground-up rubber in cyanoacrylate-based adhesive; hoof leveling and balancing compd., hoof patch and custom contoured hoof pad)				
IT	Acrylic polymers, uses Glass fibers, uses Urethane polymers, uses RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses) (urethane rubber compd. contg.; hoof leveling and balancing compd., hoof patch and custom contoured hoof pad)				
IT	7782-42-5, Graphite, uses 9002-84-0, Teflon 9002-86-2, PVC 25233-30-1, Polyaniline RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses) (urethane rubber compd. contg.; hoof leveling and balancing compd., hoof patch and custom contoured hoof pad)				

L74 ANSWER 43 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1995:767730 HCAPLUS

DN 123:151249

TI Sulfur-modified, bitumen-free tall-oil pitch **binders**, building material mixtures and aqueous dispersions containing the **binder**, and manufacture of modified tall-oil pitch

IN Sychra, Marcel; Steindl, Harald

PA Krems Chemie Aktiengesellschaft, Austria

SO PCT Int. Appl., 15 pp.

CODEN: PIXXD2

DT Patent

LA German

IC ICM E04B026-26

ICS C08L095-00

ICA E01C007-08

CC 58-4 (Cement, Concrete, and Related Building Materials)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9518276	A1	19950706	WO 1994-AT207	19941229
	W: AU, BG, BR, CA, CN, CZ, FI, HU, JP, NO, NZ, PL, RO, RU, SI, SK, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AT 9302654	A	19970315	AT 1993-2654	19931230
	AT 403052	B	19971125		
	AU 9512676	A1	19950717	AU 1995-12676	19941229
	EP 739321	A1	19961030	EP 1995-903706	19941229
	EP 739321	B1	19980506		
	R: AT, DE, FR				
	AT 165799	E	19980515	AT 1995-903706	19941229
	FI 9602640	A	19960626	FI 1996-2640	19960626
PRAI	AT 1993-2654		19931230		
	WO 1994-AT207		19941229		
AB	The bitumen-free binders , esp. for surfacing traffic areas, sports grounds, and the like, sealing compds., grouting compns., and insulating paints and coatings, consist essentially of tall oil modified with 0.1-40, esp. 1-10 wt. parts S. The building material mixts. contain, along with the bitumen-free binder , 20-98, esp. 85-97 wt. parts, inorg. aggregate having particle size 2-32, esp. 4-16 mm. The aq. dispersions, esp. for use as insulating paint and coating material, contain binder 30-85, esp. 40-60, tall oil or other suitable emulsifier 2-10, esp. 3-5, optionally hydroxide, esp. KOH, 0.01-0.1 wt. parts, and, also optionally, additives, and balance water. The modified tall-oil pitch is manufd. by heating tall-oil pitch 100 with S 0.1-40, esp. 1-10 wt. parts, at 80-250, esp. 100-160.degree..				
ST	tall oil pitch sulfur coating paint; emulsifier tall oil pitch sulfur; potassium hydroxide emulsifier pitch				
IT	Hydroxides				
	RL: TEM (Technical or engineered material use); USES (Uses) (emulsifiers; sulfur-modified, bitumen-free tall-oil pitch binder manuf. for use in paving, and water-thinned paints and coating materials)				
IT	Emulsifying agents				
	(hydroxides; sulfur-modified, bitumen-free tall-oil pitch binder manuf. for use in paving, and water-thinned paints and coating materials)				
IT	Aggregates				

(inorg.; sulfur-modified, bitumen-free tall-oil pitch **binder** manuf. for use in paving, and water-thinned paints and coating materials)

IT Antioxidants
Binding materials
 Grout
 Pavements and Roads
 Pigments
 Sealing compositions
 Vulcanization accelerators and agents
 (sulfur-modified, bitumen-free tall-oil pitch **binder** manuf. for use in paving, and water-thinned paints and coating materials)

IT Naphthenic oils
 Tall-oil pitch
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sulfur-modified, bitumen-free tall-oil pitch **binder** manuf. for use in paving, and water-thinned paints and coating materials)

IT Rubber, **butadiene-styrene**, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (block, triblock, sulfur-modified, bitumen-free tall-oil pitch **binder** manuf. for use in paving, and water-thinned paints and coating materials)

IT Coating materials
 (paints, water-thinned, sulfur-modified, bitumen-free tall-oil pitch **binder** manuf. for use in paving, and water-thinned paints and coating materials)

IT Plastics
 RL: TEM (Technical or engineered material use); USES (Uses)
 (thermo-, sulfur-modified, bitumen-free tall-oil pitch **binder** manuf. for use in paving, and water-thinned paints and coating materials)

IT 1310-58-3, Potassium hydroxide, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (emulsifier; sulfur-modified, bitumen-free tall-oil pitch **binder** manuf. for use in paving, and water-thinned paints and coating materials)

IT **106107-54-4**
 RL: TEM (Technical or engineered material use); USES (Uses)
 (rubber, block, triblock, sulfur-modified, bitumen-free tall-oil pitch **binder** manuf. for use in paving, and water-thinned paints and coating materials)

IT 1314-13-2, Zinc oxide, uses 7704-34-9, Sulfur, uses 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-29-6, Polybutylene **106107-54-4, Butadiene-styrene** block copolymer
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sulfur-modified, bitumen-free tall-oil pitch **binder** manuf. for use in paving, and water-thinned paints and coating materials)

L74 ANSWER 44 OF 95 WPIX (C) 2003 THOMSON DERWENT
 AN 1995-350798 [45] WPIX
 DNN N1995-261554 DNC C1995-153704
 TI Compsn. for **racetrack** surfaces - includes **particulate** material and **binder** contg. oil-soluble copolymer of ethylene-vinyl alcohol, oil dispersible copolymer of **ethylene** and **propylene** and hydrocarbon oil.
 DC A17 A93 H08 L02 P36
 IN BEARDEN, C R; KOTTLE, S
 PA (FAST-N) FASTRAC SYSTEMS INC

CYC 1

PI US 5455295 A 19951003 (199545)* 12p A63K001-00

ADT US 5455295 A CIP of US 1989-445009 19891204, CIP of US 1991-711930 19910607, CIP of US 1991-753720 19910903, US 1991-775822 19911011

PRAI US 1991-775822 19911011; US 1989-445009 19891204; US 1991-711930 19910607; US 1991-753720 19910903

IC ICM A63K001-00

AB US 5455295 A UPAB: 19951114

A compsn. for **racetrack** surfaces comprises: (a) a **binder** which does not pour readily at less than 125deg.F; and (b) **particulate** matter consisting of sand.

Component (a) consists of (i) an oil-soluble polymer selected from the soluble copolymers of ethylene with vinyl acetate, the amt. of vinyl acetate being 20-30 wt.%; (ii) an oil-dispersible polymer selected from copolymers of **ethylene** and **propylene**; and (iii) a hydrocarbon oil which is fluid at greater than about -25deg.F. The amt. of (a) is 2-12 wt.%.

Components (a) and (b) are mixed to form a compsn. which can be compressed into a pad for a **racetrack** and can be harrowed to form a rakeable cushion for such a track.

Also claimed is a compsn. in which: component (a) does not pour readily at less than 130deg.F and which consists of an elastomeric polymer component of chlorinated polyethylene, **styrene butadiene**, **ethylene propylene** diene, or their mixts. and (iii); and component (b) is **particulate** matter mixed with component (a).

Component (a) further contains 0.2-2.0 wt.% carbon black.

Amts. of (i), (ii) and (iii) are 30-70 wt.%, 70-30 wt.%, and 85-95 wt.%. An additive is included for improving rakeability. This is a non-plastic clay which has an average **particle** size of 1-150 microns.

Amt. of elastomeric polymer component is 3-15 wt.%. The component is made up of a mixt. of elastomers.

A second non-elastomeric polymer component of PP is present in the compsn. of claim (1). Amt. used is about 70 wt.% of total wt. of polymers.

USE - The compsn. is used esp. for **horse racetrack surface** material.

ADVANTAGE - The compsn. is an all-weather material which does not become sticky or form clumps in hot weather, nor is it adversely affected by wet weather. The compsn. is easily installed and does not require long periods of time to establish the pad.

Dwg.0/4

FS CPI GMPI

FA AB

MC CPI: A04-B03; A04-G06; A04-G07; A07-A02A; A10-E04A; A12-F01A; A12-R09; H08-D; L02-D09

L74 ANSWER 45 OF 95 RAPRA COPYRIGHT 2003 RAPRA

AN R:540098 RAPRA FS Rapra Abstracts

TI **RUBBER** IS FINE FOR SHEETING.

AU White L

SO European Rubber Journal 177, No.2, Feb.1995, p.20-1

ISSN: 0260-5317

CODEN: ERJTDW

PY 1995

DT Journal

LA English

AB The latest development from Rosehill Polymers is a sheet **rubber**

, made by mixing finings from scrap **rubber** grinding with a **thermoplastic** at high temperature and forming the resulting "dough" into a continuous sheet. The product is said to have major price advantages against other materials. Potential applications include acoustic insulation in cars, bridge decking and flat roof membranes. Finding markets for **rubber** crumb is a crucial aspect to further development of material recycling in the **rubber** industry. For **playground surfaces**, Rosehill supplies both the PU **binder** needed to hold the crumb in a coherent matrix and also provides tile-making equipment. The company says a major innovation has been means of manufacturing its PU prepolymers, which is now a continuous process.

CC 06; 51PC; 62.15; 62.12; 625; 8.13; 43C6; 6A6

SC *CB; ON; OQ; OJ; KT; SN

CT ACOUSTIC INSULATION; AUTOMOTIVE APPLICATION; **BINDER**; BRIDGE DECK; CAPACITY; CARPET UNDERLAY; COMPANY; COMPATIBILITY; CONTINUOUS REACTOR; **CRUMB RUBBER**; CURE TEMPERATURE; CURE TIME; DATA; **ELASTOMER**; FOAM; FUNDING; MACHINERY; MARKETING; MEMBRANE; MOISTURE CURING; ONE-COMPONENT; **PARTICLE**; PLASTIC; **PLAY SURFACE**; POLYURETHANE; PREPOLYMER; PRICE; PRODUCTION CAPACITY; PRODUCTION RATE; PU; RAILWAY APPLICATION; RECYCLED CONTENT; RECYCLING; ROOFING; **RUBBER**; **SCRAP RUBBER**; SCRAP TYRES; SHEET; SHUTTLE PRESS; SOLVENTLESS; SURFACE MODIFICATION; TECHNICAL; **THERMOPLASTIC**; TILE; TURNOVER; SCRAP TIRES

NPT MDI

SHR COMPANY INFORMATION, Rosehill Polymers, recycling, crumb **rubbers**, sheeting, PU, **binders**; RECYCLING, **rubbers**, company information; SCRAP POLYMERS, crumb **rubbers**, sheeting, company information; SHEETING, crumb **rubbers**, company information; URETHANE POLYMERS, **binders**, company information; **BINDERS**, PU, company information

CO ROSEHILL POLYMERS LTD.

GT EUROPEAN COMMUNITY; EUROPEAN UNION; UK; WESTERN EUROPE

L74 ANSWER 46 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1994:272850 HCAPLUS

DN 120:272850

TI Mechanical properties of surface modified bauxite filled SBR vulcanizates.
I

AU Ulkem, Ilhan; Akovali, Guneri

CS Dep. Chem., Middle East Tech. Univ., Ankara, 06531, Turk.

SO European Polymer Journal (1994), 30(5), 567-72

CODEN: EUPJAG; ISSN: 0014-3057

DT Journal

LA English

CC 39-12 (Synthetic **Elastomers** and Natural **Rubber**)

AB The ultimate properties of rubber products are strongly influenced by the size, size distribution, structure, surface area and surface selectivity of fillers. In this study, natural bauxite was coated with plasma polymer (polystyrene or polybutadiene) to modify surface properties. The coated and uncoated bauxites were tested as filler for SBR vulcanizates, using static and dynamic mech. methods. The fracture surfaces of the vulcanizates were investigated by SEM. Plasma polymer-modified bauxite loaded materials showed appreciable changes in hardness compared with samples loaded with uncoated bauxite. It was concluded that **surface selectivity plays** a more important role than surface area for bauxite in the SBR vulcanizates.

ST SBR plasma polymer coated bauxite filler; mech SBR vulcanizate modified

bauxite
 IT Rubber, **butadiene-styrene**, miscellaneous
 RL: MSC (Miscellaneous)
 (fillers for, plasma-polymer-coated bauxite as, vulcanizate mech. properties in relation to)
 IT Glass temperature and transition
 Mechanical loss
Particle size
 Surface area
 (of SBR vulcanizates filled with plasma-polymer-coated bauxite)
 IT Polymer morphology
 (fracture-surface, of SBR vulcanizates filled with plasma-polymer-coated bauxite, mech. properties in relation to)
 IT Coating process
 (plasma, on bauxite, as fillers for SBR, vulcanizate mech. properties in relation to)
 IT 9003-17-2, Polybutadiene 9003-53-6, Polystyrene
 RL: PRP (Properties)
 (bauxite surface modified with, as fillers for SBR, vulcanizate mech. properties in relation to)
 IT 1318-16-7, Bauxite, uses
 RL: USES (Uses)
 (plasma-polymer-coated, as fillers for SBR, vulcanizate mech. properties in relation to)
 IT 9003-55-8
 RL: PRP (Properties)
 (rubber, fillers for, plasma-polymer-coated bauxite as, vulcanizate mech. properties in relation to)

 L74 ANSWER 47 OF 95 RAPRA COPYRIGHT 2003 RAPRA
 AN R:516212 RAPRA FS Rapra Abstracts
 TI NEW PRODUCT IMPROVES FUTURA'S TRACK RECORD.
 AU Miller J
 SO Rubber and Plastics News 23, No.20, 9th May 1994, p.10
 ISSN: 0300-6123
 PY 1994
 DT Journal
 LA English
 AB It is briefly reported that Futura Coatings has developed a pigmented polyol that improves a running track's appearance and increases its service life by minimising material penetration into a track's crumb-rubber base mat. The new Futura-Tech P-8900 gives the track a thicker appearance, helps the track retain its colour, provides better traction and helps protect the base mat from the environment. The P-8900, custom made for any colour requirements, works with Futura-Tech P-8820, a urethane **binder** for SBR and EPDM **granules**.
 CC 33C6; 6A3; 6R1; 43C6
 SC *QP; QB; IA; KT
 CT **BINDER; BUTADIENE-STYRENE COPOLYMER; COLOUR**
 RETENTION; COMPANY; CRUMB RUBBER; DATA; ELASTOMER; ENVIRONMENTAL RESISTANCE; EPDM; **ETHYLENE-PROPYLENE-DIENE TERPOLYMER**; PIGMENT; POLYURETHANE; PU; RUBBER; RUNNING TRACK; SBR; SERVICE LIFE; SHORT ITEM; **SPORTS SURFACE**; SURFACE COATING; TRACTION; COLOR RETENTION
 NPT POLYOL
 SHR COATINGS, polyols, **sports surfaces**; POLYOLS, coatings, **sports surfaces**; BUILDING APPLICATIONS, **sports surfaces**, polyols, coatings, PU; URETHANE POLYMERS, **sports surfaces**

CO FUTURA COATINGS INC.
 GT USA
 TN FUTURA-TECH P-8900; FUTURA-TECH P-8820

L74 ANSWER 48 OF 95 HCAPLUS COPYRIGHT 2003 ACS
 AN 1994:10169 HCAPLUS
 DN 120:10169
 TI Dynamic viscoelastic properties of loaded elastomers
 AU Gerspacher, Michel
 CS Sid Richardson Carbon and Gasoline Co., Fort Worth, TX, USA
 SO Carbon Black (2nd Ed.) (1993), 377-87. Editor(s): Donnet, Jean-Baptiste;
 Bansal, Roop Chand; Wang, Meng-Jiao. Publisher: Dekker, New York, N. Y.
 CODEN: 59IQAC
 DT Conference
 LA English
 CC 39-12 (Synthetic **Elastomers** and Natural **Rubber**)
 AB Low-strain (<10%) and high-strain dynamic properties of DBR and natural
 rubber samples contg. 50% carbon black were compared. Anal. of the
 obtained results showed that the the low-strain dynamic properties are
 reasonably well explained by a filler network whose cohesion depends
 mainly on the carbon black itself and the polymer being essentially the
 spatial support of that network, while the high-strain behavior depends on
 the polymer-rubber interactions. It is proposed that at low strain the
 phys. properties of the carbon black-filled rubber can be predicted by the
 sp. surface area of the filler, while at higher strain, when the network
 has vanished, the carbon black subnetworks' primary contribution is to
 perturbate the flow of the polymeric chains when both the filler structure
 and the filler size (sp. **surface area**) can
play an influencing role.
 ST carbon black rubber dynamic viscoelasticity; SBR carbon black dynamic
 viscoelasticity; natural rubber carbon black viscoelasticity
 IT Rubber, **butadiene-styrene**, properties
 Rubber, natural, properties
 RL: PRP (Properties)
 (carbon black-filled, dynamic viscoelastic properties or)
 IT Carbon black, properties
 RL: PRP (Properties)
 (natural rubber and SBR filled with, dynamic viscoelastic properties
 of)
 IT Surface area
 (of carbon black **particles**, dynamic viscoelastic properties
 of carbon black-filled rubber in relation to)
 IT Energy
 (cohesive, in carbon black-filled natural rubber and SBR)
 IT 9003-55-8
 RL: PRP (Properties)
 (rubber, carbon black-filled, dynamic viscoelastic properties or)

L74 ANSWER 49 OF 95 RAPRA COPYRIGHT 2003 RAPRA
 AN R:470087 RAPRA FS Rapra Abstracts
 TI MDI **BINDERS** ENSURE OPTIMUM RUNNING TRACK PERFORMANCE.
 SO ICI Polyurethanes Newsletter 5, No.5, 1993, p.6
 PY 1993
 DT Journal
 LA English
 AB MDI **binders** are said to be fast displacing those based on TDI
 in the elastomeric rubber **granule binders** and
 coatings market, in the US, for resilient **sports** and

recreational **surfaces**, as performance advantages outweigh cost factors. The more versatile chemistry of MDI makes it possible to modify and optimise specific characteristics to meet end-user, needs - as was demonstrated in the reconstruction of a running track at the Pattonville high school in St.Louis. Details are given.

CC 43C6; 63Bu; 6A6

SC *QB; QP; KT

CT **BINDER; BUTADIENE-STYRENE COPOLYMER; COMPANY;**
LEGISLATION; MATERIAL REPLACEMENT; PLASTIC; POLYURETHANE; PRODUCT
ANNOUNCEMENT; PU; REGULATION; SBR; **SPORTS SURFACE**

NPT MDI

SHR **BINDERS, sports surfaces, PU; URETHANE**

POLYMERS, binders, sports surfaces;

SPORTS SURFACES, PU, binders

CO DENNIS CHEMICAL CO.; ICI

GT USA

L74 ANSWER 50 OF 95 RAPRA COPYRIGHT 2003 RAPRA

AN R:505715 RAPRA FS Rapra Abstracts

TI USE OF HIGH LEVELS OF **ELASTOMERIC GRANULES** IN
RESILIENT SURFACING.

AU Shiffer R C

CS Carlisle Tire & Rubber Co.

SO IRC '93-144th Meeting, Fall 1993. Conference Proceedings

Editor(s): **ACS, Rubber Div.**

Orlando, Fl., 26th-29th Oct.1993, Paper 150, pp.14. 012

PY 1993

DT Conference Article

LA English

AB The technology used in producing resilient **sports,**
playground and similar **surfaces** using high levels of
rubber granules is reviewed. The potential of such
applications as an outlet for reclaimed **rubber** is discussed.

CC 62.15; 6R1

SC *QP; OQ

CT ABRASION RESISTANCE; ACRYLIC POLYMER; ACRYLIC RESIN; **BINDER;**
BUTADIENE-STYRENE COPOLYMER; COEFFICIENT OF FRICTION; COMPACTION;
COMPANY; CONFERENCE; **CRUMB RUBBER;** CURING; DATA; DENSITY;
DISPERSION; **ELASTOMER;** EMULSION; ENERGY ABSORPTION; EPDM;
EPOXIDE RESIN; EPOXY RESIN; **ETHYLENE-PROPYLENE-DIENE TERPOLYMER**
; FLASH; FRICTIONAL PROPERTIES; **GRANULE;** INDENTATION; LATEX;
MECHANICAL PROPERTIES; MIXING; MOULDING; **PARTICLE SIZE;**
PLASTIC; **PLAY SURFACE;** PLAYGROUND; POLARITY; POLYURETHANE;
POLYVINYL CHLORIDE; PU; PVC; RECLAIM; RECYCLING; RESILIENCE; RHEOLOGICAL
PROPERTIES; **RUBBER;** SBR; SCRAP; SHEET; **SPORTS SURFACE**
; SURFACE TENSION; TABLES; TECHNICAL; TENSILE STRENGTH; TEST; TEST
METHOD; TESTING; **THERMOPLASTIC;** THERMOSET; TYRE; VISCOSITY;
VULCANISATION; WASTE; WATER PERMEABILITY; MOLDING; TIRE; VULCANIZATION

SHR **SPORTS SURFACES, rubber, reclaimed**

rubber; RECLAIMED RUBBER, sports

surfaces

GT USA

L74 ANSWER 51 OF 95 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 4

AN 1993:86469 HCAPLUS

DN 118:86469

TI All-weather **racetrack** compositions

IN Bearden, Charles R.

PA Trac Tek Systems, Inc., USA
 SO S. African, 20 pp.
 CODEN: SFXAB
 DT Patent
 LA English
 IC ICM E01C
 ICS C04B; C08F
 CC 58-4 (Cement, Concrete, and Related Building Materials)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	ZA 9100035	A	19920226	ZA 1991-35	19910103
	GB 2251247	A1	19920701	GB 1990-28019	19901224
PRAI	GB 1990-28019		19901224		
AB	The compns. comprise a binder contg. an oil-sol. polymer, e.g., ethylene-vinyl acetate copolymer (ELvax 250), an oil-dispersible copolymer, e.g., ethylene-propylene copolymer in a hydrocarbon oil (fluid at 40-100.degree.F), and a filler, e.g., sand and/or clay. The compns. are useful for resilient horse-riding surfaces.				
ST	horse track polymeric compn				
IT	Clays, uses Hydrocarbon oils RL: USES (Uses) (paving compns. contg., for all-weather horse tracks)				
IT	Rubber, synthetic RL: USES (Uses) (EPDM, paving compns. contg., for all-weather horse tracks)				
IT	Sporting goods (horse-riding surfaces, all-weather, polymeric, manuf. of)				
IT	9002-88-4D, chlorinated 9003-07-0, Polypropylene 9003-55-8, Butadiene-styrene copolymer 9010-86-0, DPD 6169 24937-78-8, Elvax 250 107852-20-0, CPE 4211 145808-25-9, Equitrack RL: USES (Uses) (paving compns. contg., for all-weather horse tracks)				
IT	74-85-1 RL: USES (Uses) (rubber, EPDM, paving compns. contg., for all-weather horse tracks)				

L74 ANSWER 52 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1992:577120 HCAPLUS
 DN 117:177120
 TI **Racetrack** surface compositions
 IN Bearden, Charles R.
 PA Trac Tek Systems Inc., USA
 SO Brit. UK Pat. Appl., 21 pp.
 CODEN: BAXXDU

DT Patent
 LA English
 IC ICM A63K001-00
 ICS C08L009-06; C08L023-08; C08L023-16; C08L023-28; E01C013-00
 CC 58-4 (Cement, Concrete, and Related Building Materials)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2251247	A1	19920701	GB 1990-28019	19901224
	CA 2032935	AA	19920622	CA 1990-2032935	19901221
	FR 2671115	A1	19920703	FR 1990-16268	19901226
	JP 04226690	A2	19920817	JP 1990-416404	19901228

ZA 9100035 A 19920226 ZA 1991-35 19910103
 PRAI GB 1990-28019 19901224
 AB The compns. comprise a **binder** compn. selected from an oil-sol.
 polymer, e.g., ethylene-vinyl acetate copolymer, an oil dispersible
 polymer, e.g., **ethylene-propylene** copolymer, and a
 hydrocarbon oil and **particulate** matter comprising sand, clay, or
 mixts. thereof. The compns. are esp. suitable for resilient **horse**
-riding surfaces.
 ST **racetrack** compn ethylene vinylacetate **binder**;
propylene ethylene binder racetrack
 compn; hydrocarbon oil horse **racetrack** compn; sand clay
particulate racetrack compn
 IT Hydrocarbon oils
 RL: USES (Uses)
 (binder contg., for horse-riding surfaces
)
 IT **Binding** materials
 (contg. oil-sol. and oil-dispersible polymer and hydrocarbon oil, for
horse-riding surfaces)
 IT Clays, uses
 Sand
 RL: USES (Uses)
 (horse-riding surface compns. contg. **binder**
 and, for all-weather conditions)
 IT **Sporting** goods
 (horse-riding surfaces, all-weather, polymeric,
 manuf. of)
 IT **9010-79-1, Ethylene-propylene** copolymer
 24937-78-8, Ethylene-vinylacetate copolymer 107852-20-0, CPE 4211
 RL: USES (Uses)
 (binder contg., for horse-riding surfaces
)
 IT 9003-07-0, Polypropylene 9010-86-0, Ethylene-ethacrylate copolymer
 24937-78-8, Elvax 250
 RL: USES (Uses)
 (binder, for horse-riding surfaces)
 IT 7631-86-9
 RL: USES (Uses)
 (sand, horse-riding surface compns. contg.
binder and, for all-weather conditions)
 L74 ANSWER 53 OF 95 WPIX (C) 2003 THOMSON DERWENT
 AN 1992-387827 [47] WPIX
 DNC C1992-172279
 TI Plastisol curable by low energy electron beam - composed of powdery paste
 resin with epoxy gps. in **particle** surfaces, unsatd. acid or cpd.
 contg. amino gp. and plasticiser.
 DC A14 A82 E19 G02
 IN NAKAMURA, E; UEKI, K
 PA (JAPG) NIPPON ZEON KK
 CYC 2
 PI JP 04288368 A 19921013 (199247)* 10p C08L101-06 <--
 US 5393801 A 19950228 (199514) 8p C08F002-46
 JP 3003247 B2 20000124 (200009) 10p C08L101-06 <--
 ADT JP 04288368 A JP 1991-58323 19910228; US 5393801 A US 1992-843254
 19920228; JP 3003247 B2 JP 1991-58323 19910228
 FDT JP 3003247 B2 Previous Publ. JP 04288368
 PRAI JP 1991-58323 19910228

IC ICM C08L101-06
ICS C08F291-00; C08G059-14; C08J003-12; C08K005-09; C08K005-17;
C08L027-06; C08L033-12; C09D004-00

ICA C08F002-46

AB JP 04288368 A UPAB: 19931116

The plastisol comprises mainly (A) a powdery paste resin having a **particle** size of 0.05-5 microns and contg. an epoxy gp. on their surfaces in a concn. of 1×10 power(-5) to 1×10 power(-3) g equiv./g: (B) an unsatd. acid having a pKa of up to 4 or an unsatd. cpd. contg. amino gp., and (C) a plasticiser.

(A) is prepd. by suspension copolymerising a vinyl chloride monomer or methyl methacrylate and opt. a copolymerisable epoxy-contg. monomer or by removing HCl from powdery vinyl chloride paste resin in the presence of an alkali to form a double bond on the surface of resin and epoxidating the double bond with an epoxidating agent (e.g. peracetic acid, etc.). The copolymerisable monomer for copolymerising with vinyl chloride monomer is a fatty acid ester (e.g. vinyl acetate, etc.), an olefin (e.g. **ethylene, propylene**, etc.), vinylidene halide (e.g. vinylidene chloride, etc.) or a vinyl ether (e.g. isobutylvinyl ether, etc.). The copolymerisable monomer for copolymerising with methyl methacrylate is e.g. an alkyl or alkanol (meth)acrylate, acrylonitrile, styrol, **ethylene, propylene**, butadiene, isoprene, dimethyl maleate, etc.. The fine suspension copolymerisation is carried out in the presence of an oleophilic initiator (e.g., dibenzoyl peroxide, di-3,5,5-trimethylhexanoyl peroxide, isopropyl peroxy carbonate, disuccinic acid peroxide, 2,2'-azobisisobutyronitrile, etc. in a wt. ratio of the monomers of 0.001-5) and a surfactant. The epoxy-contg. monomer is e.g., (meth)allylglycidyl ether, glycidyl (meth)acrylate, glycidyl-p-vinylbenzoate, butadiene monoxide, vinylcyclohexane monoxide, etc.. The seeding suspension polymerisation is carried out using the seed prepd. by the fine suspension copolymerisation, anionic surfactant solely or in combination with a nonionic surfactant in the presence of a water-soluble reducing agent (e.g. ethylenediamine tetraacetic acid or its alkaline metal salt, sulphinic acid or its alkali metal salt, etc.) and an organic peroxide (e.g. cumene hydroperoxide, p-cymene hydroperoxide, etc.) the unsatd. acid having a pKa of up to 4.0 is e.g. halo-substd. (meth)acrylic acid, 2-(meth)acrylic acid, 2-(meth)acrylamide-2-methylpropane sulphonate, 2-sulphonato ethyl (meth)acrylate, di-(2-(meth)acryloxy3-propyl acid)phosphate, etc. The unsatd. cpd. contg. amino gp. is e.g. dimethylaminoethyl (meth)acrylate, diethylaminoethyl (meth)acrylate, N-t-butylaminoethyl (meth)acrylate, etc.. (C) is a plasticiser conventionally used in plastisoles.

ADVANTAGE - The plastisol is crosslinked effectively by irradiation with low energy electron

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A05-A01B1; A08-C07; A08-D02; A08-D03; A08-P01; A11-C02B; A12-B01L;
A12-S10; E05-G09D; E10-A09B8; E10-B02E; E10-C04F; E10-C04G; G02-A02G

L74 ANSWER 54 OF 95 RAPRA COPYRIGHT 2003 RAPRA

AN R:458581 RAPRA FS Rapra Abstracts

TI PREPOLYMER TECHNOLOGY ENSURES CONSISTENT **BINDER** PERFORMANCE.

SO ICI Polyurethanes Newsletter 5, No.3, 1992, p.6

PY 1992

DT Journal

LA English

AB Rosehill Polymers offers PU **binder** technology and machinery

packages for both in-situ laying and factory production of tiles made from **rubber granules** and similar waste material. Applications include a wide variety of safety and **sports surfaces**, e.g. children's **playgrounds**, football pitches and running tracks. Its prepolymer production process ensures highly consistent **binder** performance.

CC 43C6; 62.12; 6R41

SC *QP; KT; ON

CT APPLICATION; **BINDER**; COMPANIES; COMPANY; DATA; **GRANULE**; MACHINE; MACHINERY; PLASTIC; **PLAY SURFACE**; PLAYGROUND; POLYURETHANE; PREPOLYMER; PU; **RUBBER**; SAFETY; SCRAP; SCRAP POLYMER; **SPORTS SURFACE**; TECHNICAL; **THERMOPLASTIC**; TILE

SHR **BINDERS**, PU, **sports surfaces**; **SPORTS SURFACES**, **binders**, PU

CO ROSEHILL POLYMERS

GT EUROPEAN COMMUNITY; UK; WESTERN EUROPE

L74 ANSWER 55 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1991-152574 [21] WPIX

DNN N1991-116966 DNC C1991-066035

TI Elastic pavement material for path for golf courses, etc. - obt'd. by mixing rubber **particles**, inorganic micro fibre and polybutadiene-ol and adding liq. isocyanate terminated urethane prepolymer.

DC A18 A93 L02 Q41

PA (FARB) SUMITOMO BAYER URETHANE CO

CYC 1

PI JP 03087406 A 19910412 (199121)*

ADT JP 03087406 A JP 1989-226599 19890831

PRAI JP 1989-226599 19890831

IC E01C007-30; **E01C013-00**

AB JP 03087406 A UPAB: 19930928

Particulate matter is obt'd. by mixing 100 (a) 100 wt. pts. Rubber **particles** having an average **grain** dia. of upto 100 mm, (b) 1 - 20 wt. pts. inorganic micro fibre having an average dia. of up to 100 micro and an average aspect ratio of 20 - 100, and (c) 1 - 15 wt. pts. Polybutadieneol having a number average mol wt. of 1000 - 10000, 10 - 45 wt. pts. liq. isocyanate terminated urethane prepolymer is added to the **particulate** matter for hardening it.

The rubber **particulates** pref. comprises natural rubber, **styrene butadiene** rubber, acrylonitrile **butadiene** rubber, vinyl pyridine butadiene rubber, polybutadiene rubber, polyisoprene rubber, polychloroprene rubber, **styrene isoprene** rubber, butyl rubber, **ethylene propylene** rubber, or polyurethane rubber. The inorganic micro fibre comprises mineral fibre contg. silica, Al oxide, Ca oxide, or Mg oxide, or glass fibre. The polyol comprises polyether polyol, polyester polyol, polycarbonate polyol, or polymer polyol.

USE/ADVANTAGE - Used for a path for **tennis courts**, or golf **courses**, promenades, and **sports grounds**. The elastic pavement material has high tensile strength, elongation percentage, and tearing strength. The elastic pavement material is used as an all weather material.

0/0

FS CPI GMPI

FA AB

MC CPI: A05-G; A08-R01; A10-E23; A12-F01A; A12-R09; A12-S09; L02-D09

L74 ANSWER 56 OF 95 WPIX (C) 2003 THOMSON DERWENT
 AN 1991-152573 [21] WPIX
 DNN N1991-116965 DNC C1991-066034
 TI Elastic pavement material - obtd. by mixing inorganic fibres of specific dimensions, rubber **particles** poly ol and liq. isocyanate-terminated urethane prepolymer.
 DC A18 A93 L02 Q41
 PA (FARB) SUMITOMO BAYER URETHANE CO
 CYC 1
 PI JP 03087402 A 19910412 (199121)*
 ADT JP 03087402 A JP 1989-226598 19890831
 PRAI JP 1989-226598 19890831
 IC **C08L021-00; C08L075-04; E01C007-30**
 AB JP 03087402 A UPAB: 19930928

To obtain the material, a **particulate** matter is obtd. by mixing:
 (a) inorganic micro fibres having an average dia. of up to 10 micron-m and an average aspect ratio of 20-100, 1-20 wt. pts.; and rubber **particles** having an average **grain** dia. of up to 10 mm, 100 wt. pts.; and a polyol having a number average mol. wt. of 500-10000, 0-10 st. pts. A liq. isocyanate terminal urethane prepolymer, 10-45 wt. pts. is added to the **particulate** matter for hardening the **particulate** matter.

The rubber **particles** pref. comprises e.g. natural rubber, **styrene butadiene** rubber, acrylonitrile **butadiene** rubber, vinyl pyridine butadiene rubber, poly-butadiene rubber, polyisoprene rubber, polychloroprene rubber, **styrene isoprene** rubber, butyl rubber, **ethylene propylene** rubber, or polyurethane rubber. The inorganic micro fibre pref. comprises: mineral fibre contg. silica, aluminium oxide, calcium oxide, or magnesium oxide; or glass fibre. The polyol comprises: polyether polyol, polycarbonate polyol, etc.

USE/ADVANTAGE - The elastic pavement material is used for path in **tennis court**, or golf **course**, promenade, or **sports ground**. The elastic pavement material has no foaming, and features high tensile strength, elongation percentage, and tearing strength, and continuous use. The elastic pavement material is suitable for all weather type one.

0/0

FS CPI GMPI
 FA AB
 MC CPI: A05-G01E; A08-R01; A08-R08; A12-F01A; A12-S08D; A12-S09; L02-D09

L74 ANSWER 57 OF 95 WPIX (C) 2003 THOMSON DERWENT
 AN 1991-097006 [14] WPIX
 DNN N1991-074796 DNC C1991-041555
 TI All-weather elastic paving for **tennis court**, etc. - comprises rubber chip, urethane **binder** and pigment e.g. iron oxide red.
 DC A18 A25 A93 L02 Q41
 PA (ASAH-N) ASahi GUM KK; (UBEI) UBE IND LTD
 CYC 1
 PI JP 03039504 A 19910220 (199114)*
 JP 2519537 B2 19960731 (199635) 5p E01C007-30
 ADT JP 03039504 A JP 1989-173985 19890707; JP 2519537 B2 JP 1989-173985 19890707
 FDT JP 2519537 B2 Previous Publ. JP 03039504
 PRAI JP 1989-173985 19890707

IC E01C007-30; **E01C013-00**

ICM E01C007-30.

ICS **E01C013-00**

AB JP 03039504 A UPAB: 19970502

An all weather-type paving material is composed of 100 pts. wt. coloured rubber chips, e.g. **butadiene** rubber, **styrene-butadiene** rubber, and/or natural rubber; 10-50 pts. wt. urethane **binder**, e.g. one-component air-hardening polymer, etc.; and 2.5-20 pts. wt. (based on 100 pts. wt. urethane **binder**) pigment, e.g., iron oxide red.

The preferred **grain** size of the coloured rubber chips is 10 mm or less.

USE/ADVANTAGE - The all weather elastic paving material is used for **tennis court, athletic ground, etc.**

The pavement has good cold resistance, adequate elasticity, good wear resistance, and weather resistance. @ (7pp Dwg.No.0/0)

FS CPI GMPI

FA AB

MC CPI: A03-B; A04-B01E; A05-G01E; A12-R09; L02-D09

L74 ANSWER 58 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1991-319712 [44] WPIX

DNN 1991-245088 DNC C1991-138141

TI Heat exchanger fit for walking on - consists of series of parallel tubes connected together by webs and completely embedded in matrix of bonded rubber-like **particles**.

DC A93 Q41 Q74

IN HAKIMELAH, P

PA (SOLK-N) SOLKAV SOLARTECH GM

CYC 14

PI EP 454663 A 19911030 (199144)*

R: AT BE CH DE ES FR GB GR IT LI LU NL SE

EP 454663 B1 19930616 (199324) DE 6p E01C011-26

R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DE 59100149 G 19930722 (199330) E01C011-26

ES 2043466 T3 19931216 (199403) E01C011-26

ADT EP 454663 A EP 1991-890090 19910425; EP 454663 B1 EP 1991-890090 19910425;

DE 59100149 G DE 1991-500149 19910425, EP 1991-890090 19910425; ES 2043466

T3 EP 1991-890090 19910425

FDT DE 59100149 G Based on EP 454663; ES 2043466 T3 Based on EP 454663

PRAI AT 1990-961 19900425

REP DE 3101913; DE 3231231; EP 210285; EP 216344; FR 2186574; FR 2574911; GB 2019931

IC E01C011-26; **E01C013-00**; F24J002-24

ICM E01C011-26

ICS **E01C013-00**; F24J002-04; F24J002-24

AB EP 454663 A UPAB: 19930928

A heat exchanger has a number of flow passages connected possibly by webs; the structure has the passages concerned in **particles** of rubber-like material which are bonded together e.g. by polyurethane adhesive. Pref. **particles** are made of **ethylene-propylene** terpolymer.

ADVANTAGE - The prods. not only use surfaces for solar heat collectors, and absorbers for heat pumps or artificial ice but also for other purposes e.g. as non-slip surrounds for swimming baths, **sports courts** (e.g. **tennis**, volleyball, etc.).

The prods. can be walked on e.g. for sports applications or convalescence uses but without needing any special covering. The properties of the prod.

prevent loss of its head downwards to the substrate beneath. The prod. can be installed in situ and used many times throughout the year if needed.
2/2

FS CPI GMPI

FA AB; GI

MC CPI: A04-G06; A12-S09; A12-W11G

L74 ANSWER 59 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1991-088769 [13] WPIX

CR 1990-354351 [47]

DNN N1991-068624 DNC C1991-037713

TI Artificial **ground surface** material for **sporting** activities - comprises **granular** material esp. sand coated with **binder** of extender oil and polymer.

DC A12 A17 A86 A93 P36 P73 Q41

IN BLYTHE, R J; HAWKINS, P

PA (ENTO-N) EN-TOUT-CAS PLC

CYC 16

PI EP 419170 A 19910327 (199113)*

R: AT BE CH DE ES FR GR IT LI LU NL SE

GB 2236109 A 19910327 (199113)

AU 9062695 A 19910411 (199122)

JP 03122306 A 19910524 (199127)

US 5088724 A 19920218 (199210)

GB 2236109 B 19930303 (199309)

E01C013-00 <--

EP 419170 A3 19920205 (199323)

ADT EP 419170 A EP 1990-310127 19900917; GB 2236109 A GB 1990-20293 19900912;

JP 03122306 A JP 1990-254050 19900921; US 5088724 A US 1990-585223

19900919; GB 2236109 B GB 1990-20293 19900917; EP 419170 A3 EP 1990-310127 19900917

PRAI GB 1989-21367 19890921; GB 1990-15870 19900719; GB 1990-20293 19900912

REP NoSR.Pub; GB 1348707; GB 435324; US 2855319; US 3437614; US 3708319; US 4433084; US 4792133; US 4852870; WO 8907635

IC ICM **E01C013-00**

ICS A63C019-00; A63J003-00; A63K001-00; B32B005-16; C08J005-14; E01C007-35

AB EP 419170 A UPAB: 19931115

A substituted ground surface material (I) comprises sand or similar **particulate** or **granular** material (II) treated with a **binder** (III) consisting of extender oil (IV) having pref. 10-60 wt. % polymeric material (V) dissolved or dispersed in it. (IV) is free flowing at ambient temps. so as to produce an inert discrete material capable of being raked when laid in a layer upon a substrate. A **surface** for **sports** activities comprising a porous base material and (I) is also claimed.

Pref. (V) is a block co-polymer, pref. a **styrene-butadiene-styrene** copolymer, or a polyhalyhaloolefin, pref. polypropylene or polyethylene. (IV) is an organic oil having aromatic functional gps. and is a paraffinic, pref. a naphthenic oil. (IV) has a viscosity transition below minus 5 deg and approx. uniform viscosity above this temp. (III) comprises 20-40 wt. % (V) pref. 40 wt. % and the remainder (IV) although it may also contain antioxidant, antiozonant, UV inhibitor and/or transition metal chelator. (I) contains 2-6.5 (2-4) wt. % (III) pref. (I) is comprised of 98 wt. % dried sand and 4 wt. % (III).

USE/ADVANTAGE - (I) is partic. useful for substitute **sports surfaces**. It is better able to retain its desired props at high and low climatic temps. @ (3pp Dwg.No.0/0)r,

0/0

FS CPI GMPI

FA AB

MC CPI: A08-P08; A12-F01A; A12-R09

L74 ANSWER 60 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1992-007871 [02] WPIX

DNN N1992-291639 DNC C1992-169693

TI Bitumen-free **binder** esp. for roads and **sports grounds** - is based on calcium-hardened tall oil pitch and contains plastics esp. thermoplastics e.g. SBS and oils, esp. naphthenic oils.

DC A93 L02 Q41

IN LOIBL, A; STEIDL, H

PA (OEMV-N) OEMV OESTERR MINERALOELVERW AG

CYC 20

PI AT 9100783 A 19911215 (199202)*

EP 514363 A1 19921119 (199247) B DE 16p C08L093-00 <--

R: BE CH DE DK ES FR GB GR IT LI LU MC NL PT SE

NO 9201467 A 19921016 (199251) C08L093-00 <--

FI 9201553 A 19921016 (199304) C04B026-26

CS 9201140 A2 19921118 (199314) C04B024-36

HU 63821 T 19931028 (199348) C04B026-00

ADT AT 9100783 A AT 1991-783 19910415; EP 514363 A1 EP 1992-890083 19920408;
NO 9201467 A NO 1992-1467 19920413; FI 9201553 A FI 1992-1553 19920408; CS
9201140 A2 CS 1992-1140 19920414; HU 63821 T HU 1992-1275 19920414

PRAI AT 1991-783 19910415

REP 1.Jnl.Ref; DE 3635283; EP 304767; WO 8906259

IC ICM C04B024-36; C04B026-00; C04B026-26; C08L093-00

ICS C04B024-26; C04B026-02; C04B026-22; E01C007-30; E01C013-00

ICI C04B018:22, C04B026-

AB AT 9100783 A UPAB: 19980428

A bitumen-free **binder** for building materials, esp. for coatings for traffic **surfaces**, **sports grounds** and the like, contains (by wt.) 50-90 (esp. 60-70)% calcium-hardened tall oil pitch, 3-25 (esp.10-20)% (esp. thermoplastic) plastics and 0-20 (esp. 5-10)% (esp. naphthenic) oils.

The plastics may be **styrene-butadiene styrene** copolymer and/or polyethylene. Also claimed are (i) a building mixt. contg. the **binder** and 20-97 (esp. 85-97) wt.% inorganic aggregate of max. **particle** size 2-32 (esp.4-16) mm; and (ii) an aq. emulsion contg. (by wt.) 50-70 (esp. 60-65)% **binder**, 2-5 (esp. 3-5)% tall oil, further additives and balance water.

ADVANTAGE - The calcium-hardened tall oil pitch is a by-product from processing resinous wood and its use avoids depletion of fossil reserves (bitumen, asphalt, natural gas and petroleum), avoids prodn. of discolouring by-products (e.g., oxidn. products) and reduces costs. (Based on EP514363; First major country equivalent to AT 9100783)

FS CPI GMPI

FA AB

MC CPI: A03-C02; A04-B03; A04-G02E4; A12-R; A12-R09; L02-D09

L74 ANSWER 61 OF 95 RAPRA COPYRIGHT 2003 RAPRA

AN R:433518 RAPRA FS Rapra Abstracts

TI SAF-DEK SUCCEEDS IN PUTTING TYRES UNDER FOOT.

AU McCarron K

SO Tire Business 9, No.11, 9th Sept.1991, p.32

ISSN: 0746-9070

PY 1991
 DT Journal
 LA English
 AB Saf-Dek, the playground division of No Fault Industries, has produced **playground surfaces** for **playgrounds** of several restaurant chains. The surface is produced by using granulated **rubber** from scrap tyres, and a polyurethane **binder**. The advantage of using granulated **rubber** is that it can be poured into place, making it seamless.

CC 62.15; 6R1
 SC *QP; KO; KT
 CT **BINDER**; BUILDING APPLICATION; BUILDING APPLICATIONS; COMMERCIAL INFORMATION; COMPANIES; COMPANY; **GRANULAR**; **GRANULE**; PLASTIC; **PLAY SURFACE**; POLYURETHANE; POROSITY; POROUS; PRODUCT ANNOUNCEMENT; PU; RECYCLING; RESILIENCE; **RUBBER**; SCRAP TYRE; SCRAP TYRES; SHORT ITEM; **THERMOPLASTIC**; SCRAP TIRE; SCRAP TIRES

SHR **SURFACE TREATMENT, playgrounds, rubber crumb, PU, binder**; RECLAIMING, scrap tyres, **play surfaces, rubber crumb**; BUILDING APPLICATIONS, **play surfaces**

CO SAF-DEK
 GT USA

L74 ANSWER 62 OF 95 WPIX (C) 2003 THOMSON DERWENT
 AN 1990-354351 [47] WPIX
 CR 1991-088769 [13]
 DNN N1990-270579 DNC C1990-153955
 TI **Ground surface material for sports surfaces** - retains desired properties at high and low climatic temps..

DC A12 A17 A86 A93 P36 P73 Q41
 IN BLYTHE, R J; HAWKINS, P
 PA (ENTO-N) EN-TOUT-CAS PLC
 CYC 3

PI US 4968024 A 19901106 (199047)*
 CA 2025701 A 19910322 (199122)
 GB 2236109 B 19930303 (199309) E01C013-00 <--
 EP 419170 A3 19920205 (199323)

ADT US 4968024 A US 1990-462711 19900109; GB 2236109 B GB 1990-20293 19900917;
 EP 419170 A3 EP 1990-310127 19900917

PRAI GB 1989-21367 19890921; GB 1990-15870 19900719
 REP GB 1348707; GB 435324; US 2855319; US 3437614; US 3708319; US 4433084; US 4792133; US 4852870; WO 8907635

IC A63J003-00; C09K003-18; E01C007-35
 ICM **E01C013-00**
 ICS A63C019-00; A63J003-00; A63K001-00; B32B005-16; C08J005-14; C09K003-18; E01C007-35

AB US 4968024 A UPAB: 19931115
 Ground surface material (I) comprises (a) **particulate** base material selected from sand and similar materials, coated with (b) **binder** comprising free flowing extender oil contg. dissolved/dispersed synthetic polymeric material.
 Also claimed is a **surface** for **sports** activities comprising a porous base material laid on the ground and covered with 15-20 cm thickness of (I).
 USE/ADVANTAGE - Easy-to-maintain material retains at high and low climatic temps. its props. of 'give' and degree of reaction, as required for **sports surfaces** esp. horse racing

tracks. @ (1pp Dwg.No.0/0) fr
0/0

FS CPI GMPI
FA AB
MC CPI: A12-F01A

L74 ANSWER 63 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1990-353064 [47] WPIX

DNN N1990-269531 DNC C1990-153585

TI Forming elastic pavement to make **tennis court** - having lower layer of **styrene-butadiene** copolymer latex mixed with **granular** silica aggregates (J6 19.6.88).

DC A93 L02 Q41

PA (SANS-N) SAN-STAR GIKEN KK

CYC 1

PI JP 02048682 B 19901025 (199047)*

JP 60112902 A 19850619 (199047)

ADT JP 02048682 B JP 1983-221659 19831124

PRAI JP 1983-221659 19831124

IC E01C007-30; **E01C013-00**

AB JP 90048682 B UPAB: 19930928

Forming elastic pavement comprises forming a lower layer made of a **styrene-butadiene** copolymer latex mixed with **granular** silica aggregates and forming an elastic layer made of a **styrene-butadiene** copolymer latex, rubber powders and silica aggregates.

USE - For reducing the working period. (J60112902-A)

0/1

FS CPI GMPI
FA AB
MC CPI: A04-B03; A08-R06A; A08-R08; A12-F01A; L02-D09

L74 ANSWER 64 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1990-166620 [22] WPIX

DNC C1990-072524

TI Coloured elastic powder rubber compsn. for road coating - obtd. by mixing rubber powder with soln., latex or emulsion of rubber or plastics, pigment etc., drying, cooling and **binding**.

DC A93 G02

PA (HARA-I) HARA Y

CYC 1

PI JP 02105828 A 19900418 (199022)*

JP 07119284 B2 19951220 (199604) 4p C08J003-12

ADT JP 02105828 A JP 1988-258056 19881013; JP 07119284 B2 JP 1988-258056 19881013

FDT JP 07119284 B2 Based on JP 02105828

PRAI JP 1988-258056 19881013

IC C08J003-20; **C08L021-00**

ICM C08J003-12

ICS C08J003-20; **C08L021-00**

ICA B29B017-00

ICI B29K021:00; C08L021:

AB JP 02105828 A UPAB: 19930928

Compsn. is obtd. by mixing an elastic powdery rubber with a soln. latex, or emulsion of rubber or plastics, pigment and additives under stirring, drying, and cooling the mixt. with solar heat or dryer under stirring and **binding** the obtd. coloured elastic powdery rubber with liq. curable rubber, urethane or plastic **binder**.

Pref. as the **binder**, soln. latex, or emulsion with low solids concn. of chlorinated rubber, neoprene rubber, **styrene-butadiene** rubber, nitrile rubber, epoxy resin, vinyl chloride resin, vinyl acetate resin, acrylic resin, EVA resin, urethane resin, etc. can be used. As the powdery rubber, ground **granular** rubber or fibrous rubber obtd. from waste car tire, tube, belt, hose, window frame, etc. can be used.

USE/ADVANTAGE - The coloured elastic powdery rubber compsn. is used for pedestrian way of a park, shopping road, **athletic ground**, indoor gymnasium, golf **course**, ball game court, jogging course, etc. because colourful pavement can be obtd. cheaply with reduced labour cost.

0/0

FS CPI

FA AB

MC CPI: A08-E01; A11-A03; A12-R; G02-A05F

L74 ANSWER 65 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1988:632916 HCAPLUS

DN 109:232916

TI Elastic compositions for floor coverings

IN Scheurer, Heinz

PA Bertschinger, Walo, A.-G., Switz.

SO Patentschrift (Switz.), 3 pp.

CODEN: SWXXAS

DT Patent

LA German

IC ICM C08J005-10

ICS E01C005-20; E01C007-00; E01C013-00

CC 42-11 (Coatings, Inks, and Related Products)

Section cross-reference(s): 39, 43

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CH 666485	A	19880729	CH 1986-2445	19860617
PRAI	CH 1986-2445		19860617		

AB The title compsn., contg. no environmentally undesirable components and useful in sports arenas, contain mixts. of synthetic, elastic **particles** (preferably EPDM and/or SBR), elastic resin **binders** (preferably polyurethanes), and cork **particles**.

ST **sporting arena floor** covering; floor covering flexible; rubber **particle** floor covering; EPDM **particle** floor covering; SBR **particle** floor covering; cork **particle** floor covering; **binder** elastic floor covering; polyurethane **binder** floor covering

IT Urethane polymers, uses and miscellaneous

RL: USES (Uses)

(**binders**, for elastic floor coverings)

IT Rubber, **butadiene-styrene**, uses and miscellaneous

RL: USES (Uses)

(blends with cork **particles** and **binders**, for floor coverings)

IT **Binding materials**

(elastic polymers, for floor coverings)

IT Cork

(**particles**, blends with rubber **particles** and **binders**, for floor coverings)

IT **Sporting goods**

(**playing surfaces**, elastic compns. for covering of)
 IT Rubber, natural, uses and miscellaneous
 Rubber, synthetic
 RL: USES (Uses)

(waste, blends with cork **particles** and **binders**, for elastic floor coverings)

IT Rubber, synthetic

RL: USES (Uses)

(EPDM, blends with cork **particles** and **binders**, for floor coverings)

IT Floors

(coverings, elastic, contg. rubber **particles**, cork **particles** and **binders**)

IT 74-85-1

RL: USES (Uses)

(rubber, EPDM, blends with cork **particles** and **binders**, for floor coverings)

IT 9003-55-8

RL: USES (Uses)

(rubber, blends with cork **particles** and **binders**, for floor coverings)

L74 ANSWER 66 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1988-193425 [28] WPIX

DNN N1988-147960 DNC C1988-086195

TI Tennis ball with good elasticity - comprises finely ground chaff of specific **particle** size range and rubber.

DC A86 P36

PA (SUMR) SUMITOMO RUBBER IND LTD

CYC 1

PI JP 63130082 A 19880602 (198828)* 5p

ADT JP 63130082 A JP 1986-276926 19861120

PRAI JP 1986-276926 19861120

IC A63B037-00; A63B039-00; C08K007-00; **C08L021-00**

AB JP 63130082 A UPAB: 19930923

A new tennis ball is made of a compsn. of 1-50 wt. pts. of finely grinded chaff and 100 wt. pts. of rubber. The **grain** size of the chaff is 10-300 m and pref. 20-100 m.

The term 'tennis hall' includes analogues such as racket balls. Prefd. rubbers include nitrile rubber, synthetic and natural rubber, EPM, EPDM, butyl rubber, **styrene-butadiene** rubber and their mixts. The chaff is commercially available. Other available fillers pref. include ZnO, CaCO₃, silicates and MgCO₃, typically with a blend ratio of 0.5-20 wt. pts. Vulcanisation accelerators such as sulphur and the thiazole type are opt. also used.

USE/ADVANTAGE - The ball has an improved elasticity and a good stroke feeling comparable to that of the press ball: samples made showed rebounds of 144-145 cm, compared with 132-142 for comparison samples (Standards of International Tennis League, 135-147) and a good to very good stroke feeling.

0/0

FS CPI GMPI

FA AB

MC CPI: A08-R07; A12-F01B

L74 ANSWER 67 OF 95 RAPRA COPYRIGHT 2003 RAPRA

AN R:365890 RAPRA FS Rapra Abstracts

TI SURFACE JUDGEMENT.

AU Millett J (SPORTS COUNCIL)
 SO Sport & Leisure 29, No. 4, Sept/Oct. 1988, p. 30/4
 ISSN: 0144-7181
 PY 1988
 DT Journal
 LA English
 AB A guide to choosing the right artificial **surface** for **sports** use is presented. The many factors which must be taken into consideration are discussed and a list of indoor **surfaces** complying with **Sports** Council Specification for Artificial **Sports Surfaces** is provided. These include surface such as Dunlop's Uniturf sheet PVC and Primaplay Europe PU on resin bonded **rubber granular** sheet. Beneath the surface use of materials including **rubber granules**, for shock absorbency, is also mentioned. 6 refs.

CC 6R1
 SC *QP
 CT ARTIFICIAL GRASS; CALCULAT; COLOUR; COMPANY; COMPANIES; COST; MATERIALS SELECTION; PLASTIC; PRODUCT ANNOUNCEMENT; PU; POLYURETHANE; PVC; VINYL CHLORIDE POLYMER; **RUBBER**; SHEETING; SHEET; SPORTS EQUIPMENT; **SPORTS SURFACE**; TECHNICAL; **THERMOPLASTIC**

SHR **SPORTS SURFACES**
 CO DUNLOP **SPORTS SURFACES** INTERNATIONAL; SPORTS COUNCIL
 GT UK
 TN PRIMAPLAY EUROPA; UNITURF

L74 ANSWER 68 OF 95 WPIX (C) 2003 THOMSON DERWENT
 AN 1987-089081 [13] WPIX
 DNN N1987-066657 DNC C1987-036904
 TI Elastic easily repairable pavement structure - obtd. by forming adhesive, e.g. of polyurethane or epoxy resin on base, applying rubber elastic layer and impregnating polymer packed layer.

DC A18 A93 L02 Q41
 PA (BAND-N) BANDO KOZAI KK; (KANE-N) KANEBO SSC KK
 CYC 1
 PI JP 62037403 A 19870218 (198713)* 10p
 JP 06080241 B2 19941012 (199439) 7p E01C013-00 <--
 ADT JP 62037403 A JP 1985-176273 19850810; JP 06080241 B2 JP 1985-176273 19850810
 FDT JP 06080241 B2 Based on JP 62037403
 PRAI JP 1985-176273 19850810
 IC E01C007-30
 ICM **E01C013-00**
 ICS E01C007-30

AB JP 62037403 A UPAB: 19930922
 An adhesive layer (A) of polyurethane resin, epoxy resin, etc., is formed on the surface of base, e.g., of concrete, etc. A rubber elastic layer (B) composed of elastic rubber **granules**, e.g., of natural or synthetic rubber such as **styrene-butadiene** rubber, nitrile-**butadiene** rubber, polyurethane rubber, butyl rubber, chloroprene rubber, EPR and a **binder**, e.g., polyurethane resin, epoxy resin, etc., having a porosity of 20-40% is formed on the adhesive layer (A). A polymer packed layer (C) of flexible polymer, e.g., two-component liquid reactive polyurethane such as polyetherurethane prepolymer from reaction of a polyalkylene ether polyol of an average molecular weight of 400-4000 and an aromatic polyisocyanate, etc., is formed on the layer (B) by impregnating. The pref. total thickness of the layers B and C is 5-25 mm.

USE/ADVANTAGE - The pavement structure has adequate elasticity and good durability and can also be easily repaired. The structure is used in roads, **sports grounds**, parks, etc.

0/3

FS CPI GMPI

FA AB

MC CPI: A12-F01A; A12-R09; L02-D04; L02-D09

L74 ANSWER 69 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1987-200488 [29] WPIX

DNN N1987-150061 DNC C1987-083839

TI Soil substrate for **surfacing sports grounds**
etc. - comprising mixt. of sand and synthetic polymeric **binder**
dissolved or dispersed in oil non-fluid at ambient temp..

DC A93 L02 P36 Q41

IN DACHTLER, J D; HAWKINS, P

PA (ENTO-N) EN-TOUT-CAS PLC

CYC 19

PI GB 2185490 A 19870722 (198729)* 3p

EP 231057 A 19870805 (198731) EN

R: AT BE CH DE ES FR GR IT LI LU NL SE

AU 8767541 A 19870716 (198735)

DK 8700147 A 19870715 (198745)

JP 62225604 A 19871003 (198745)

BR 8700028 A 19871201 (198802)

US 4792133 A 19881220 (198902) 3p

US 4852870 A 19890801 (198938) 3p

GB 2185490 B 19900711 (199028)

CA 1272531 A 19900807 (199037)

EP 231057 B 19910724 (199130)

R: AT BE CH DE ES FR GR IT LI LU NL SE

DE 3771511 G 19910829 (199136)

ES 2025148 B 19920316 (199216)

US 34267 E 19930601 (199323)# 3p A63J003-00

ADT GB 2185490 A GB 1987-166 19870106; EP 231057 A EP 1987-300098 19870107; JP 62225604 A JP 1987-7396 19870114; US 4792133 A US 1986-939540 19861208; US 4852870 A US 1988-244697 19880914; US 34267 E US 1986-939540 19861208, US 1990-630274 19901219

FDT US 34267 E Reissue of US 4792133

PRAI GB 1986-735 19860114; GB 1987-166 19870106

REP A3...8818; CH 183401; GB 1171; GB 250678; GB 307448; GB 575485; No-SR.Pub; US 3334556

IC A63J003-00; A63K001-00; C04B014-06; C04B026-10; C04B041-46; C08K003-00;

C08L101-00; C09K003-18; C09K017-00; E01C007-36; **E01C013-00**

AB GB 2185490 A UPAB: 19930922

A soil substitute material comprises sand or other **particulate** or **granular** mineral material treated with a synthetic polymeric **binder** (I) dispersed or dissolved in an oil (II), the (II) having a viscosity such that it is non-fluid at ambient temps. so as to produce an inert discrete material permanently capable of being raked when laid in a layer on a substrate.

The oil pref. has the consistency of soft grease at ambient temp. and becomes liq. at temps. in a range immediately above normal temps. Suitable oils are eg petroleum based oils, organic oils, bitumen or gas oil, siliconised oil, latices, alginates and molasses. The polymer is pref ethylene-vinyl acetate (esp. EVA contg. ca. 28% vinyl acetate), polystyrene, nylon, polypropylene or PVC.

USE/ADVANTAGE - The materials are esp. useful as a rakeable soil

substitutes for **surfacing** of **sports** and recreation **grounds**, dog- and horse racing **tracks**, etc.

The **surface** is durable, resilient and unaffected by the weather and is not subject to dusting, hardening, freezing, waterlogging, etc., thus retaining consistent properties and reducing the incidence of injury to joints and muscles of users such as racehorses.

0/0

FS CPI GMPI

FA AB

MC CPI: A12-F01A; L02-D09

L74 ANSWER 70 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1987-170991 [25] WPIX

DNN N1987-128339 DNC C1987-071241

TI **Thermoplastic** moulding compsn. resistant to leakage currents, etc. - contains halogenated co-polycarbonate, graft polymer, TFE polymer, antimony or bismuth cpd., titanium di oxide, etc..

DC A13 A14 A23 E32 Q22 V03 X27

PA (FARB) BAYER AG

CYC 8

PI DE 3544295 A 19870619 (198725)* 6p

EP 229956 A 19870729 (198730) DE

R: DE ES FR GB IT NL

JP 62141059 A 19870624 (198731)

US 4731405 A 19880315 (198814) 6p

ADT DE 3544295 A DE 1985-3544295 19851214; EP 229956 A EP 1986-116929

19861205; JP 62141059 A JP 1986-291678 19861209; US 4731405 A US

1986-935824 19861128

PRAI DE 1985-3544295 19851214

REP DE 2211826; EP 131751; FR 2223422

IC B62D029-04; C08J003-20; C08K003-22; C08K013-02; **C08L025-00;**

C08L027-18; C08L033-00; C08L051-06;

C08L069-00

AB DE 3544295 A UPAB: 19930922

Compsns. (I) comprise: A. 60-85 wt.% copolycarbonate, contg. 3-20 wt.% halogen, of a dihydric phenol and a dihydric halogenated phenol; B. 10-30 wt.% graft polymer of: 1) 5-90 wt.% mixt. of: a. 50-95 wt.% styrene, alpha-methylstyrene, nuclearly substd. styrene, and/or MMA, and b. 50-5 wt.% (meth)acrylonitrile, MMA, maleic anhydride, and/or N-substd. maleimide, on 2) 95-10 wt.% acrylate **rubber** of max. glass temp.

(Tg) 10 deg.C; C. 5-30 wt.% **thermoplastic** copolymer of: 1) 50-95 wt.% styrene, alpha-methylstyrene, nuclearly substd. styrene, and/or MMA; and 2) 50-5 wt.% (meth)acrylonitrile, MMA, maleic anhydride, and/or N-substd. maleimide, where % under A, B, and C total 100; D. 0.05-2.0 pts.wt., A + B + C, TFE polymer, average **particle** size 100-1000

microns, density 2.0-2.3 g/cub. cm; E. 1-5 pts.wt., per 100 pts.wt. A + B + C, Sb2O3, Sb carbonate, Bi2O3, or Bi carbonate; F. 4-12 pts.wt., per 100 pts.wt. A + B + C, TiO2, and opt. G. 0-15 pts.wt., per 100 pts.wt. A + B + C, lower mol. organic halogen cpd. where halogen content of A + G does not exceed 20 wt.% A + G.

USE/ADVANTAGE - Partic. injection moulding, to form household articles (e.g., juice presses); covering panels for building trade; parts for motor vehicle mfr.; electrical engineering (e.g., switch boxes); also deep drawing of sheets or films. (I) have good resistance to leakage currents, flames, and heat, good processability; mouldings have acceptable surface quality after exposure to leakage currents.

0/0

FS CPI EPI GMPI

FA AB; DCN

MC CPI: A04-C01A; A04-D03A; A04-D08; A04-E08A; A04-E09; A04-F05; A04-F06B;
A05-E06A; A07-A04D; A08-F; A08-F02; A08-M09A; A08-R; A09-A03; E31-M;
E35-K02; E35-M
EPI: V03-B04A; X27-B03

L74 ANSWER 71 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1986-085031 [13] WPIX

CR 1993-162431 [20]

DNN N1986-061912 DNC C1986-036278

TI Paving layer for urethane track - mfd. by forming synthetic resin emulsion
and portland cement layer primer layer and polyurethane layer on asphalt
concrete base.

DC A93 Q41

PA (KANE) KANEBO NSC KK

CYC 1

PI JP 61031503 A 19860214 (198613)* 8p
JP 03026725 B 19910411 (199119)

ADT JP 61031503 A JP 1984-151861 19840720

PRAI JP 1984-151861 19840720

IC C08L075-04; E01C007-30; E01C013-00

AB JP 61031503 A UPAB: 19960823

The paving layer of urethane track is constructed by a method in which a
polymer cement paste layer comprising synthetic resin emulsion (e.g.,
styrene-butadiene rubber or an acrylic resin) and
Portland cement is formed on an asphalt concrete base of broken stones,
sand, and straight asphalt or cut-back asphalt, a primer layer (e.g.,
polyurethane, epoxy resin, or **styrene-butadiene**
rubber) is formed on the polymer cement paste layer, and a polyurethane
layer contg. an expanded elastic **grain** (e.g., **styrene-**
butadiene rubber or polyurethane composed partly of urea bonds of
an aromatic diamine and an aromatic polyisocyanate and ternary
cross-linked bonds of the aromatic polyisocyanate and a polyalkylene ether
polyol) is formed on the primer layer in order.

USE/ADVANTAGE - The urethane track paving layer is free of sepn. from
the base ground and blister and has adequate elasticity and high weather
proofness. The paving layer is effectively used for all-weather type
sport grounds, etc..

Dwg.0/1

Dwg.0/1

FS CPI GMPI

FA AB

MC CPI: A03-C03; A05-G01E1; A12-F01A; A12-R01A; A12-S04B

L74 ANSWER 72 OF 95 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 5

AN 1986:111135 HCAPLUS

DN 104:111135

TI Solvent removal from **ethylene-propylene** elastomers.

1. Determination of diffusion mechanism

AU Matthews, Frank J.; Fair, James R.; Barlow, Joel W.; Paul, Donald R.;
Cozewith, Charles

CS Dep. Chem. Eng., Univ. Texas, Austin, TX, 78712, USA

SO Industrial & Engineering Chemistry Product Research and Development
(1986), 25(1), 58-64

CODEN: IEPRA6; ISSN: 0196-4321

DT Journal

LA English

CC 39-12 (Synthetic **Elastomers** and Natural **Rubber**)

AB A diffusion model for solvent removal for EPR rubber was developed. In a pilot-scale study, the transport mechanisms and rates were detd. for the typical case of hexane [110-54-3] solvent being removed by steam stripping. The overall rate of removal was controlled by **particle** structure, with **surface**-connected pores **playing** a prominent role.

ST EPR rubber solvent stripping; steam stripping hexane EPR rubber; diffusion model solvent EPR

IT Process simulation, physicochemical
(for diffusion of hexane in EPR rubber during steam stripping)

IT Steam
(hexane removal from EPR rubber by, diffusion model for)

IT Diffusion
(mechanism of, of hexane in EPR rubber during steam stripping)

IT Solvents
(removal of, from EPR rubber, diffusion mechanism for)

IT Rubber, ethylene-propene
RL: USES (Uses)
(solvent removal from, detn. of diffusion mechanism of)

IT 110-54-3, uses and miscellaneous
RL: USES (Uses)
(steam stripping of, from EPR rubber, model for diffusion in)

L74 ANSWER 73 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1985-214490 [35] WPIX

DNN N1985-160927 DNC C1985-093562

TI Elastic paving material - comprises urethane resin, **ethylene - propylene** copolymer, fillers and vulcanisers.

DC A93 L02 Q41

PA (DNIN) DAINIPPON INK & CHEM KK

CYC 1

PI JP 60138103 A 19850722 (198535)* 6p

JP 05009562 B 19930205 (199308) 6p E01C007-30

ADT JP 60138103 A JP 1983-243789 19831226; JP 05009562 B JP 1983-243789 19831226

FDT JP 05009562 B Based on JP 60138103

PRAI JP 1983-243789 19831226

IC ICM E01C007-30
ICS **E01C013-00**

AB JP 60138103 A UPAB: 19930925
Elastic paving material is composed of urethane resin (e.g., prepared from a polyether polyol such as ethylene glycol, etc., and an organic polyisocyanate such as 2,4-tolylene diisocyanate, etc., together with a catalyst such as triethylamine, etc., a filler such as whisker, aluminium powder, etc., a plasticiser such as dibutyl phthalate, etc., a pigment, an ageing inhibitor, etc.) 30 wt.% or more **ethylene-propylene** terpolymer **granules** (e.g., ones prepared by adding a third component such as dicyclopentadiene, etc.) to an **ethylene-propylene** blend, together with a process oil, carbon black, a sulphur cpd. etc., followed by vulcanisation at 130-160 deg. C having a **grain** size of 0.3-8 mm.
USE/ADVANTAGE - The elastic paving material has excellent durability and can be obtained at low cost. The elastic paving material is effectively used for **tennis courts**, golf **playground**, **athletic grounds**, etc..
0/0

FS CPI GMPI

FA AB

MC CPI: A04-G06; A05-G01E; A07-A04E; A12-F01; A12-R; L02-D09

L74 ANSWER 74 OF 95 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 6

AN 1984:634718 HCAPLUS

DN 101:234718

TI Constructing an all-weather surface

IN Maxfield, Marvin L.

PA Seal-Flex, Inc., USA

SO U.S., 4 pp.

CODEN: USXXAM

DT Patent

LA English

IC B05D005-10; E01C005-12

NCL 427138000

CC 58-4 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 39

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4474833	A	19841002	US 1982-410265	19820823
	US 4529622	A	19850716	US 1984-646505	19840904
PRAI	US 1982-410265		19820823		

AB All-weather paved surfaces, esp. UV-resistant **surfaces** for **athletic** activities, are provided in the form of a plurality of **binder** coatings interspersed with **particulate** rubber layers. Initially the mat or surface comprising the foundation is tack coated at .gtoreq.0.2 gal/yd² with SS1H (asphaltic emulsion) [42616-75-1], coated with waste tire rubber **particles** (-3/8 +16 mesh), tack coated again at .gtoreq.0.3 gal/yd², sprayed at 10-40 psi with Amsco Resin 4170 (**butadiene-styrene** latex) having 50% solids cut back to 30% by water and contg. a surfactant (e.g., low sudsing dishwashing detergent at 1 cup per 55 gal of mix) for penetration, subjected to drying 1-12 h, coated with the rubber **particles** at 2 lb/yd² and with the latex-water compn., subjected to drying to give a final 0.25-0.50 in. thick surface, and coated with finer rubber **particles** for a fine surface texture. Conventional sealers are used for a black finish or pigments may be added in the above stages for other colors. After 3-5 yr the latex-water and rubber compns. may be applied for restoration and maintenance as needed. Normally the surface does not need to be replaced.

ST rubber waste latex athletic pavement

IT Rubber, **butadiene-styrene**, uses and miscellaneous

RL: USES (Uses)

(coatings, in all-weather pavement contg. asphalt emulsions and waste rubber tire **particles**)

IT Tires

(waste rubber, in all-weather pavement contg. asphalt emulsions and latex)

IT Pavements and Roads

(running tracks, asphalt emulsions and latex and waste tire rubber **particles** in all-weather)

IT Pavements and Roads

(sports fields, asphalt emulsions and latex and waste tire rubber **particles** in all-weather)

IT 42616-75-1

RL: USES (Uses)

(coatings, in all-weather pavement contg. latex and rubber **particles**)

L74 ANSWER 75 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1985-020684 [04] WPIX

TI **Equestrian arena surfaces** of polymeric **granules** - pref. as mixtures of dense and expanded **thermoplastic** and **elastomeric granules**.

DC A86 Q41

IN MARTINEZ, A

PA (BATT-N) BAT TARAFLEX SA

CYC 1

PI FR 2546927 A 19841207 (198504)* 5p

ADT FR 2546927 A FR 1983-9933 19830606

PRAI FR 1983-9933 19830606

IC **E01C013-00**

AB FR 2546927 A UPAB: 19930925

Artificial **grounds** for **sports** purposes, esp. **horse** riding, incorporated non-coherent **granules** or **particles** of **thermoplastic** or **elastomeric** matls. pref. including cellular **granules** of expanded PVC, polyethylene, polyurethane or **rubber**. The mix used may comprise equal quantities of such **granules** and conventional material, such as sand. The grounds may be stratified, specifically as a (10 cm deep) layer of cellular **granules**, over a (20 cm deep) layer of dense **granules**, or a layer of mixed dense and expanded (apparent density of 0.5) over a layer of dense **granules**, specifically of PVC.

USE/ADVANTAGE - Esp. suitable for equestrian contests, i.e. dressage or show jumping. The discreet, compressible **particles** deform sufficiently to reduce the incidence of injuries to horses hooves or limbs, yet provide sufficient resilience for jumping purposes.

0/0

FS CPI GMPI

FA AB

MC CPI: A12-F01; A12-S04D

L74 ANSWER 76 OF 95 RAPRA COPYRIGHT 2003 RAPRA

AN R:258372 RAPRA FS Rapra Abstracts

TI DUNLOP DRIVE ON SPORTS.

SO Plastics and Rubber Weekly No.1052, 25th Aug.1984, p.5

ISSN: 0032-1168

PY 1984

DT Journal

LA English

AB Details are presented on Dunlop's range of **sports surfaces** which have been introduced in a bid to boost its position in the world's fast growing market for synthetic **sports surfaces**. A new urethane system, Dunlotrack has been introduced which offers maximum spike and wear resistance. Other products include Dunlotred, Dunlosprint, Dunlospor and Dunloplay. Mention is also made of two new products being introduced onto the market: Dunlopark, a multi-purpose synthetic grass system suitable for tennis, soccer and hockey facilities; and Primaplay Europa, which can be laid on virtually any smooth, level sub base and is installed in stages consisting of a sub layer of granulated rubber sheeting followed by the application of a self-levelling PU top layer.

CC 6R1

SC *QP

CT COMPANY; COMPANIES; DURABILITY; EPDM; **ETHYLENE-PROPYLENE-DIENE**

TERPOLYMER; GRANULAR; GRANULE; MARKET; PU;
POLYURETHANE; RUBBER; SPORTS APPLICATION; SPORTS SURFACE;
SYNTHETIC GRASS; WEAR RESISTANCE; ABRASION RESISTANCE

SHR **SPORTS SURFACES**
 CO DUNLOP **SPORTS SURFACES** INTERNATIONAL
 GT UK
 TN DUNLOPARK; DUNLOPLAY; DUNLOSPOR; DUNLOSPRINT; DUNLOTRACK; DUNLOTRED;
 PRIMAPLAY EUROPA

L74 ANSWER 77 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1983-766555 [38] WPIX

DNN N1983-165565 DNC C1983-089966

TI **Sports ground surfacing** esp. for indoor
tennis courts - comprises **thermoplastics**
 flakes esp. of polyurethane **rubber** or modified PVC loosely
 sprinkled on firm base.

DC A86 P41 Q41

IN KRUMBOCK, E; SCHOBERMAY, H

PA (SCHO-I) SCHOBERMAYR H

CYC 11

PI EP 88748 A 19830914 (198338)* DE 14p

R: AT BE CH DE FR GB IT LI NL SE

EP 88748 B 19860604 (198623) DE

R: AT BE CH DE FR GB IT LI NL SE

DE 3363878 G 19860710 (198629)

US 4822026 A 19890418 (198918)

ADT EP 88748 A EP 1983-890031 19830308; US 4822026 A US 1983-472666 19830307

PRAI EP 1982-890036 19820308; EP 1983-890031 19830308

REP CH 611959; DE 2110327; DE 2602652; US 3291486; US 3731923; US 3736847; CH
 505650; DE 2420913

IC B02C018-44; **E01C013-00**

AB EP 88748 A UPAB: 19930925

A **surfacing** material for **sports areas**, esp.
 for indoor **tennis courts**, comprises a loose sprinkling
 of **particles** including plastics **particles**. This loose
 layer of **particles** is applied to a substantially flat, firm
 sub-base, typically of asphalt, and the **particles** are for the
 most part flake-shaped. The flakes are of an elastic plastics material on
 a basis of **thermoplastic** polyurethane **elastomer**,
 single-component or two-component polyurethane system, a
thermoplastic rubber, a modified PVC compound or
 combination of any or all of these.

A surfacing of this type provides the necessary wear resistance, the
 necessary friction but also a certain amount of slip so that sudden
 stopping is not excessively tiring on the leg muscles and joints.

0/1

FS CPI GMPI

FA AB

MC CPI: A03-C03; A05-G01E; A10-E01; A12-F01; A12-R

L74 ANSWER 78 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1983-61313K [26] WPIX

DNN N1983-110265 DNC C1983-059531

TI Artificial turf of fabric backed polypropylene filaments - on porous
particulate rubber base to combine durability,
 resilience and drainage.

DC A94 F07 P36 P73 Q41

IN POLMAN, H A

PA (CALI) CHEVRON RES CO

CYC 6

PI BE 895889 A 19830530 (198326)* 20p
 US 4389434 A 19830621 (198327)
 DE 3304820 A 19830825 (198335)
 GB 2115347 A 19830907 (198336)
 FR 2521603 A 19830819 (198338)
 NL 8300195 A 19830901 (198339)

PRAI US 1982-348385 19820212

IC A63C019-04; B29H009-02; B32B005-02; B32B007-14; B32B025-02; D04H011-00;
 D04H013-00; D05C017-00; D06N007-00; E01C007-00; **E01C013-00**

AB BE 895889 A UPAB: 19930925

Permeable artificial turf comprised a porous, resilient base made of adhesive bonded **particles** of **rubber** or similar material to which is bonded by a series of discontinuous adhesive patches a nap of **thermoplastic** fibres which resemble turf and are anchored by looped roots in a fabric backed by a heat-resistant layer of glass and/or high m.pt. (polyester) filaments. The nap is bonded to the backing layer by applying sufficient heat to fuse the roots of the nap fibres without destroying the permeability of the structure.

Used for fabrication of artificial **sports surfaces** having a porosity to water of at least 60, pref. at least 200 l of water/m² per min.

FS CPI GMPI

FA AB

MC CPI: A05-E01B; A12-F01; A12-R; F04-B

L74 ANSWER 79 OF 95 JAPIO COPYRIGHT 2003 JPO

AN 1983-168639 JAPIO

TI PIGMENT AND PRODUCTION THEREOF

IN KOGA TETSUAKI

PA KOKUDO DORO KK

PI JP 58168639 A 19831005 Showa

AI JP 1982-52726 (JP57052726 Showa) 19820331

PRAI JP 1982-52726 19820331

SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1983

IC ICM C08L017-00

ICS C08K009-12

AB PURPOSE: To form a pigment suitable for use as a component for a spray paint applied to **tennis courts**, running **tracks**, etc., by kneading rubber powder and fine colored inorg. oxide **particles** by using a mixing device constructed with an insulating material.

CONSTITUTION: A mixing device comprising a mortar and a pestle made of porcelain is used. 80wt% rubber powder such as one having a **particle** size passing through #200 sieve obtd. by crushing used tire composed of **styrene/butadiene** rubber, and 20wt% fine colored inorg. oxide **particles** such as red iron oxide having an average **particle** size of 0.5 μ m, are placed in the mortar and kneaded with stirring at ordinary temp., while applying an appropriate force thereto by means of the pestle, to obtain a pigment in which the surface of the rubber powder is covered with the fine red iron oxide **particle**. The pigment can be easily mixed with and dispersed in an aq. synthetic resin emulsion. When spray coating is conducted by using the resulting paint, a coated surface which is elastic and soft to the touch, can be formed.

COPYRIGHT: (C)1983, JPO&Japio

L74 ANSWER 80 OF 95 WPIX (C) 2003 THOMSON DERWENT DUPLICATE 7

AN 1982-03560J [48] WPIX

TI Rubber prod. having metallic lustre - comprises transparent rubber, lustrous metal powder and organic peroxide crosslinking agent.

DC A18 A28 A60

PA (MARU-N) MARUSHO KK; (NAMI-N) NAMIHANA GUM KOGYO KK

CYC 1

PI JP 57172938 A 19821025 (198248)* 4p

PRAI JP 1981-40697 19810320

IC B29H007-00; C08K003-08; C08K005-14; C08L021-00

AB JP 57172938 A UPAB: 19930915

Rubber prod. having metallic lustre and flexibility and elasticity, comprises 100 pts.wt. of (1) transparent and organic peroxide-crosslinkable rubber, 0.1-10 pts.wt. of (2) lustrous metal powder and 0.1-7 pts. of (3) organic peroxide inert to (2).

The rubber prod. is produced by mixing homogeneously (2) and (3) with (1), and moulding and crosslinking the mixt.

External-decorative material such as turntable mat for **player**, bumper, **floor** mat, dashboard.

Pref. (1) includes, e.g. **ethylene-propylene** rubber, chlorinated polyethylene, silicone rubber, urethane rubber, isoprene rubber. Pref. (2) includes, e.g. Al powder having **grain** size of 10-50 microns, pref. ca 20 microns. To improve the strength and durability of rubber prod., fine silica, transparent magnesium carbonate, etc. in an amt. of below 50 pts. may be added. Where chlorinated polyethylene is used, 1-10 pts. acid acceptor, e.g. epoxy resin is pref. used. 0.5-20 pts. of co-crosslinking agent is pref. added to **ethylene propylene** rubber, urethane rubber, butadiene rubber, etc. as (1).

FS CPI

FA AB

MC CPI: A08-C05; A08-D; A08-E02

L74 ANSWER 81 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1983-764034 [37] WPIX

DNN N1983-163434 DNC C1983-089096

TI Racecourse tracks surface coating - uses rubber strips across racecourse with longitudinal rubber elements bearing limestone screenings.

DC A93 Q41

IN KUZUYAKIN, N I; RATSEN, Z E; STRELNIKOV, V Y A

PA (KROA-R) KAZA ROAD DES TECHN

CYC 1

PI SU 973685 A 19821115 (198337)* 2p

PRAI SU 1980-3008841 19801126

IC E01C013-00

AB SU 973685 A UPAB: 19930925

The racecourse tracks surface has a rigid base (I) bearing a resilient layer (2) which is made in the form of strips (3) of rubber material, 1.5-2mm. in thickness and supplied in rolls. These strips (3) are laid across the racecourse track and have attached to their upper side in chequer board array through an adhesive layer (4) longitudinal rectangular rubber elements (5) over which loose material (6) is distributed. The loose material (6) can be limestone screenings of 0-5mm. fraction and is laid in a layer 20mm. thick.

The rigid base (I), in accordance with the requirements of present standards, consists of an earth surface (7), an underlying layer (8), a layer of 40-70mm. fraction chips (9), a layer of black chips (10) and a double layer of hot asphalt concrete (II). Bul. 42/15.11.82.

1/2

FS CPI GMPI
FA AB
MC CPI: A12-F01; A12-R

L74 ANSWER 82 OF 95 WPIX (C) 2003 THOMSON DERWENT
AN 1982-41986E [21] WPIX
TI Bituminous compsn. with good rebound resilience - comprises bitumen, hardened extract, tyre crumb and filler.
DC A93-L02 Q41
IN DOLDEN, J G; FOGG, S G
PA (BRPE) BRITISH PETROLEUM CO LTD
CYC 3
PI GB 2087407 A 19820526 (198221)* 8p
FR 2493329 A 19820507 (198225)
DE 3143655 A 19820708 (198228)
GB 2087407 B 19841128 (198448)
ADT GB 2087407 A GB 1981-33220 19811104
PRAI GB 1980-35606 19801105; GB 1981-33220 19811104
IC C08L095-00; C09D003-46; E01C013-00
AB GB 2087407 A UPAB: 19930915
A bituminous compsn. with energy absorbing properties comprises bitumen, hardened extract, finely divided **particles** of crosslinked non-**thermoplastic rubber**, and filler, The amt. by wt. of finely divided **particles** of crosslinked non **thermoplastic rubber** is equal to or greater than that of the filler. The bitumen is a **rubberised** bitumen, the **rubber** of which is a non **thermoplastic** copolymer (I) of at least 2 mono alpha olefins and a cyclic olefin having an endocyclic bridge and at least 2 olefinic double bonds.
The compsn. is used as a safety **surface** for childrens' **playgrounds**, and has a suitable rebound resilience, it deforms readily under load and recovers relatively quickly. It is mfd. in the form of sheets or tiles.
FS CPI GMPI
FA AB
MC CPI: A03-C03; A04-A03; A04-B01; A04-G01B; A07-A01; A08-R01; A12-F01; A12-R09; L02-D10

L74 ANSWER 83 OF 95 WPIX (C) 2003 THOMSON DERWENT
AN 1982-90839E [43] WPIX
TI Loose **tennis court flooring** - made of foil flakes or scales from polyurethane or modified pvc compound.
DC A86 P36 P41 Q41
IN KRUMBOECK, E; SCHOBEMAY, H
PA (SCHO-I) SCHOBEMAYR H
CYC 10
PI EP 63111 A 19821020 (198243)* EN 9p
R: AT BE CH DE FR GB IT LI NL SE
AT 8101056 A 19830815 (198337)
AT 8300094 A 19840815 (198437)
EP 63111 B 19851227 (198601) DE
R: AT BE CH DE FR GB IT LI NL SE
DE 3268073 G 19850206 (198607)
ADT EP 63111 A EP 1982-890036 19820308
PRAI AT 1981-1056 19810309; AT 1983-94 19800929
REP CH 505650; CH 611959; DE 2110327; DE 2420913; DE 2602652; No-SR.Pub; US 3291486; US 3731923; US 3736847

IC A63C019-00; B02C018-44; **E01C013-00**
 AB EP 63111 A UPAB: 19930915

Flooring for sports grounds, esp. for **tennis courts**, consists of a loose bulk material layer which is applied on a foundation, e.g. of asphalt and consists mostly of **particles** of an **elastomer** plastic. The **particles** should be in the form of scales or flakes of max. 1.5 mm thickness and max. 5 mm size the other direction.

Pref. the materials used include a polyurethane **elastomer** a one- or two component polyurethane **elastomer**, a one- or two-component polyurethane system, a **thermoplastic rubber** or a PVC cpd., modified by polyurethane.

This creates a flooring which feels just as good to a player as brick dust.

FS CPI GMPI

FA AB

MC CPI: A12-F01; A12-R03

L74 ANSWER 84 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1981:426296 HCAPLUS

DN 95:26296

TI Polymeric coverings for **sports surfaces**

IN Bovis, Claude; Trebuchon, Pierre

PA Naphtachimie S. A., Fr.

SO Brit., 6 pp.

CODEN: BRXXAA

DT Patent

LA English

IC E01C013-00; B32B005-16; B32B027-40

CC 37-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1585029	A	19810218	GB 1978-20198	19780517
	FR 2391319	A1	19781215	FR 1977-15277	19770518
	FR 2391319	B1	19820219		
	ES 469890	A1	19790816	ES 1978-469890	19780516
	CH 630427	A	19820615	CH 1978-5350	19780517
PRAI	FR 1977-15277		19770518		

AB Elastic, flexible, wear-resistant, nonslip **surfaces** for **sports** or games **areas** were manufd. by applying a support and alternately and successively layers of 200-1000 g/m² polyurethane **binder** (viscosity 1-200 P at -10 to +40.degree.) and elastic or plastic **particles** to cover the **binder**. Layers are applied to give a total thickness of 0.5-5 mm. Thus, a prepolymer was prepd. by heating 15 parts 80/20 TDI and 85 parts propylene oxide-glycerol polyaddn. triol (equiv. wt. 1000) 3 h at 75.degree.. A **binder** (viscosity 16 P at 20.degree.) was manufd. from the prepolymer [9017-04-3] 80, red Fe oxide 10, Et glycol acetate 10, and dibutyltin dilaurate 0.3 parts. The **binder** was applied at 500 g/m² to a bituminous support and a layer of <1-mm-size polyurethane rubber **granules** was applied at 1000 g/m². After 12 h 500 g unfixed **granules** were removed. A 3-mm-thick covering, produced with 2 further operations, was even without surface cracks and had slipperiness 90 dry and 72 wet, measured with a RRL pendulum on a 0-150 scale.

ST polyurethane artificial **playing surface**; **sport** artificial **playing surface**; rubber urethane **playing surface**; **binder** urethane

playing surface
 IT Urethane polymers, uses and miscellaneous
 RL: USES (Uses)
 (binder, for urethane rubber **granule**-contg.
 artificial **playing surface** for **sports**)
 IT Rubber, **butadiene-styrene**, uses and miscellaneous
 Rubber, urethane, uses and miscellaneous
 RL: USES (Uses)
 (**granules**, **sports** artificial **playing**
surface contg., polyurethane **binders** for)
 IT **Sporting goods**
 (artificial **playing surfaces**, of polyurethane-bound
 urethane rubber **granules**)
 IT 9017-04-3
 RL: USES (Uses)
 (binder, for urethane rubber **granule**-contg.
sports artificial **playing surface**)

L74 ANSWER 85 OF 95 HCAPLUS COPYRIGHT 2003 ACS
 AN 1981:104553 HCAPLUS
 DN 94:104553
 TI Balls for games
 PA Teijin Ltd., Japan; Matsumoto Yashi-Seiyaku Co., Ltd.
 SO Jpn. Kokai Tokkyo Koho, 3 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC A63B045-00; A63B037-00; C09J005-06
 CC 37-3 (Plastics Fabrication and Uses)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 55138466	A2	19801029	JP 1979-45433	19790416
PRAI	JP 1979-45433		19790416		

AB Polyurethane adhesives contg. expandable or expanded **thermoplastic**
 resin **particles** contg. a liq. volatile blowing agent were useful
 for bonding a nylon yarn core to a leather substitute cover to give
sporting balls with improved **surface** uniformity. Thus,
 20 parts acrylonitrile-divinylbenzene-vinylidene chloride copolymer
 [51732-71-9] **particles** contg. 15% isobutane and 250 parts Bondik
 1310F (I) [73247-17-3] were mixed to give an adhesive (A). Nylon yarns
 were wound around a **rubber** ball by using compn. A and
 heat-treated 2 min at 130.degree.. A leather substitute from
 polyurethane-coated polyester nonwoven fabric was coated (40 g/m²; solids)
 with compn. A, heat-treated 1 min at 110.degree., and pressed together
 with the above core for 15 min at 120.degree.. Surface creasing did not
 occur for the above elastic ball, in contrast to the surface creasing
 obsd. for a ball obtained with an adhesive compn. contg. I only.
 ST polyurethane cellular adhesive ball; leather substitute nylon bonding;
 polyamide leather substitute bonding; sporting ball polyurethane adhesive
 IT Polyamide fibers, uses and miscellaneous
 RL: USES (Uses)
 (adhesives for bonding of, to leather substitute covers, in manuf. of
 sporting balls)
 IT Leather substitutes
 (adhesives for bonding of, to nylon yarns, in manuf. of sporting balls)
 IT Adhesives
 (cellular polyurethanes, contg. expanded acrylic polymer

- particles**, in manuf. of **sporting** balls with improved **surface** uniformity)
- IT Urethane polymers, uses and miscellaneous
 RL: TEM (Technical or engineered material use); USES (Uses)
 (cellular, adhesives, contg. expanded acrylic polymer **particles**
 , in manuf. of **sporting** balls with improved **surface**
 uniformity)
- IT Polyester fibers, uses and miscellaneous
 RL: USES (Uses)
 (leather substitutes, adhesives for bonding of, to nylon yarns, in
 manuf. of sporting balls)
- IT Sporting goods
 (balls, from nylon yarn goods and leather substitute covers, cellular
 polyurethane adhesives in manuf. of)
- IT 73247-17-3
 RL: TEM (Technical or engineered material use); USES (Uses)
 (cellular, adhesives, contg. expanded acrylic polymer **particles**
 , in manuf. of **sporting** balls with improved **surface**
 uniformity)
- IT 51732-71-9
 RL: USES (Uses)
 (**particles**, expanded, cellular polyurethane adhesives contg.,
 in manuf. of **sporting** balls with improved **surface**
 uniformity)

L74 ANSWER 86 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1980-53921C [31] WPIX

TI **Playing surface** comprising nonwoven support of
thermoplastic fibres - with alternate layers of resin binder and
 powdered **rubber** waste as wear surface.

DC A93 P73 Q41

PA (ERAM-N) ERAM INDUSTRIE

CYC 2

PI FR 2439084 A 19800620 (198031)*

US 4337292 A 19820629 (198228)

PRAI FR 1978-29641 19781018

IC B29D009-00; B32B005-16; B32B027-08; **E01C013-00**

AB FR 2439084 A UPAB: 19930902

Playing surface for **sport** comprises a
 nonwoven support of **thermoplastic** fibres calendered to less than
 mm. thickness. The support carries alternate layers of a compatible
 polymerisable resin and powdered **rubber** waste coated at least in
 part with the resin to act as the wearing surface. Pref. fibres are
 polyester or polyamide. Pref. the support is impregnated with a size,
 esp. an acrylic resin. To enhance the surface effects the **rubber**
 waste may be replaced, at least in the final wear layer, by short fibres.

Pref. the top surface is coated with a thin layer of esp.
 polyurethane **elastomer**. Pref. solid fillers or short fibres
 comprise polyurethane **elastomer**, vulcanised **rubber**,
 EPDM, opt. crosslinked copoly(ethylene-cyclopentadiene) etc. Pref.
particle size of filler is 0.2-5, esp. 0.2-1 mm. The
 polymerisable resin is e.g. a polyurethane or polychloroprene binder.

FS CPI GMPI

FA AB

MC CPI: A11-C03; A12-F01; A12-R03; A12-S05G

L74 ANSWER 87 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1980-38502C [22] WPIX

TI Bituminous compsns. with energy-absorbing properties - contg.
thermoplast and vulcanised **rubber**.
DC A93 A95 L02
IN DOLDEN, J G
PA (BRPE) BRITISH PETROLEUM CO LTD
CYC 3
PI DE 2943706 A 19800522 (198022)*
GB 2036760 A 19800702 (198027)
FR 2440977 A 19800711 (198035)
GB 2036760 B 19830413 (198315)
PRAI GB 1978-43606 19781108; GB 1979-38595 19791107
IC **C08L007-00; C08L009-00; C08L053-00;**
C08L095-00; C09D003-24
AB DE 2943706 A UPAB: 19930902
Bituminous compsns. contg. (A) bitumen, (B) hardened extract, (C)
thermoplastic rubber, (D) fine-**particle non-**
thermoplastic rubber, usually vulcanised, and (E)
filler, in amount up to that of (D).
Used as safety **flooring** in children' **playgrounds**,
bumpers for vehicles, fenders for ships, and motorway barriers. High
energy-absorbing properties, low rebound and good recovery are provided.
FS CPI
FA AB
MC CPI: A03-C03; A07-A01; A08-R; A12-H09; A12-R; A12-R03; A12-T04B; L02-D10

L74 ANSWER 88 OF 95 RAPRA COPYRIGHT 2003 RAPRA
AN R:83378 RAPRA FS Rapra Abstracts
TI BITUMINOUS COMPOUNDS SUITABLE FOR USE AS SAFETY **SURFACES**, e.g.
CHILDRENS **PLAYGROUNDS**.
IN Dolden J G
PA British Petroleum Co.Ltd.
SO pr.8.11.78(7843606) (GB)publ.2.7.80
PI GB 2036760
DT Patent
LA English
AB Comprise bitumen, hardened extract, a **thermoplastic**
rubber, finely divided **particles** of non-
thermoplastic rubber and a filler, the amount of non-
thermoplastic rubber by weight being equal to or
greater than the amount of filler by weight.
CC 6R1; 7
CT **RUBBER; FILLER; SPORTS SURFACE; THERMOPLASTIC**
; COMPANY; PARTICLES
NPT BITUMEN
CO BRITISH PETROLEUM CO.LTD.

L74 ANSWER 89 OF 95 WPIX (C) 2003 THOMSON DERWENT
AN 1979-41254B [22] WPIX
TI Elastic **playing surface** - comprises base coated with
coarse **granular** rubber layer, fine **granular** rubber
sealing layer, then synthetic resin surface layer.
DC A18 A25 A93 L02 Q41
PA (MITK) MITSUI TOATSU CHEM INC
CYC 1
PI JP 54048927 A 19790417 (197922)*
JP 56024043 B 19810603 (198126)
PRAI JP 1977-115101 19770927
IC E01C007-30; **E01C013-00**

AB JP 54048927 A UPAB: 19930901

An economical elastic surface exhibiting excellent elasticity and durability, esp. suitable for use in the **ground**, the field, a **tennis court** and a basket ball court, etc. is made by applying a coarse **granular** rubber layer having cavities in the inner part, comprising a coarse **granular** rubber having minimum **granular** size of $\geq 1\text{mm.}$, e.g. pulverised waste tyre, natural rubber, **styrene-butadiene** rubber, polybutadiene rubber, polyisoprene rubber, polyurethane rubber, etc. and a synthetic resin **binder** e.g. polyurethane, acrylic ester copolymer, SBR, EVA copolymer, polyamide, polyester and polyepoxide, etc. on a base, e.g. made of concrete, mortar, asphalt concrete, wood plate and synthetic resin, etc.

This is followed by applying a fine **granular** rubber layer having the max. **granular** size $< 1\text{mm.}$ e.g. made of the same material as that of the coarse **granular** rubber to seal the coarse **granular** rubber layer and subsequently applying a synthetic resin facing layer, e.g. made of polyurethane, acrylic ester copolymer, **styrene-butadiene** rubber, EVA copolymer, polyamide, polyester or polyepoxide etc.

FS CPI GMPI

FA AB

MC CPI: A11-B05; A12-F01; A12-R; L02-D09

L74 ANSWER 90 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1978:460842 HCAPLUS

DN 89:60842

TI Scrap rubber resilient mat

IN Pierson, Robert M.; Wert, Richard L.; Mastin, Thomas G.

PA Goodyear Tire and Rubber Co., USA

SO Can., 14 pp.

CODEN: CAXXA4

DT Patent

LA English

CC 38-9 (Elastomers, Including Natural Rubber)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 1028796	A1	19780328	CA 1973-178914	19730816
PRAI	US 1972-289893		19720918		

AB Pulverized, demetalized tire scrap of a vulcanized rubber of high fiber content, with .gtoreq.50% by wt. of the **particles** having a dimension .gtoreq.0.5 in. is combined with a rubber **binder** and used to prep. resilient turf-like mats contg. .gtoreq.35% by vol. of voids, suitable for covering playgrounds. Thus, 18.8 lb no. 2-mesh ground tire scrap (**particle** av. length .apprx.0.75 in. and length-width ratio 1.5-4.0) was mixed 3-5 min with 8.0 lb prevulcanized natural rubber latex (60% solids, heated at 140.degree.F for 1 h with a S-donor curing agent) and 1.6 lb aq. **grain** pigment comprising green Cr2O3 100, water 125, Na3PO4 0.5, Tamal 731 2.0, and butylated p-cresol-cyclopentadiene reaction product antioxidant 6 parts, spread over a fresh pea gravel surface, and raked to orient the scrap **particles** upward to obtain covering of .apprx.1 in. deep over the surface. The composite was air-cured 48 h at 70.degree.F and spray-coated with a mixt. contg. a MeCOEt soln. of an acrylonitrile-2-ethylhexyl acrylate copolymer 300, 40:60 Cr2O3-Epon 828 mixt. 15, Desmodur N 15, PhMe 300, and MeCOEt 15 parts to give a porous and essentially self-cleaning surface with void content 57% by vol.

ST tire scrap resilient mat; natural rubber **binder** mat; playground covering mat

IT Asphalt
RL: USES (Uses)
(**binders**, contg. SBR, for ground tire scrap in manuf. of turflike porous resilient mats)

IT Rubber, **butadiene-styrene**, uses and miscellaneous
RL: USES (Uses)
(**binders**, contg. asphalt, for ground tire scrap in manuf. of turflike porous resilient mats)

IT Rubber, urethane, uses and miscellaneous
RL: USES (Uses)
(**binders**, for ground tire scrap in manuf. of turflike porous resilient mats)

IT Rubber, natural, uses and miscellaneous
RL: USES (Uses)
(**binders**, for ground tire scrap in manuf. of turflike resilient porous mats)

IT **Binding** materials
(rubber, for ground tire scrap in manuf. of turflike porous resilient mats)

IT **Sporting** goods
(artificial **playing surfaces**, ground tire scrap in manuf. of)

IT Tires
(waste, in manuf. of turflike porous resilient mats)

L74 ANSWER 91 OF 95 WPIX (C) 2003 THOMSON DERWENT

AN 1978-33550A [19] WPIX

TI Composite materials with **particulate** filler - and **thermoplastic rubber** binder, useful as sound proofing panels and **sports floors**.

DC A18 A81 E19 P73

IN GRILL, R; LIEDL, P; SCHWAB, J

PA (SEMP) SEMPERIT AG

CYC 1

PI CH 598312 A 19780428 (197819)*

PRAI CH 1975-14744 19751113

IC B32B025-02; **C08L021-00**; **C08L053-02**; C09J003-12

AB CH 598312 A UPAB: 19930901

Bound composite materials are comprised of a lumpy filler e.g. of scrap **rubber** (tyres), wood waste, fibre scrap, asbestos, and inorganic fillers, bound into a composite panel using a **thermoplastic rubber** binder. The binder is pref. based on polystyrene-polybutadiene-polystyrene or polystyrene-polyisoprene-polystyrene block copolymers.

The m. pt. and melt viscosity of the **rubber** compsn. is reduced by the addn. of 30-50 wt % of a colophony resin, coumarone-indene resin, polystyrene, methylstyrene-vinyl toluene copolymers, alicyclic hydrocarbon resins, olefin copolymers, modified rosin acid resins, polyterpene resins etc. The **rubber** may also contain 10-15 wt % of a plasticiser such as paraffinic and/or naphthenic oils, eaxes and low melting resins, and 1-5 wt % of an antioxidant such as phenolic cpd. (2,2'-methylene-bis(4-methyl-6-tert. butyl) phenol), thio cpds. (zinc dibutyldithiocarbamate) or chelate formers (phosphites).

Process allows prods. with high strength to be made using small amts. (<5 wt % esp. <3 wt %) binder. The binder gives good wetting of the filler **particles** and gives higher strength prods. than known

latex binders, coupled with reduced energy consumption during mfr.

FS CPI GMPI

FA AB

MC CPI: A11-C03; A12-A05; A12-R01; E31-P05

L74 ANSWER 92 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1977:46772 HCAPLUS

DN 86:46772

TI Structural material

IN Wallace, Richard A.

PA USA

SO U.S., 9 pp. Continuation of U.S. 3,846,366.

CODEN: USXXAM

DT Patent

LA English

IC C08G051-04

NCL 260038000

CC 58-5 (Cement and Concrete Products)

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3991005	A	19761109	US 1974-438235	19740131
	US 3846366	A	19741105	US 1971-201111	19711122
	JP 48060172	A2	19730823	JP 1972-111555	19721107
	US 4013616	A	19770322	US 1974-503396	19740905
PRAI	US 1971-201111		19711122		
	US 1974-438235		19740131		

AB Pyrolysis or incineration residues of industrial or municipal solid waste products are an excellent **particulate** reinforcement filler material. Fine residues (av. size <50.mu. in diam.), such as incinerated waste or coal fly ash and certain pyrolysis products, used as filler give good properties. The **particulate** filler (30-90 parts by wt.) is mixed with 10-70 parts by wt. of flowable castable resin **binder**, e.g. poly(vinyl chloride) [9002-86-2], its copolymers, polyacrylates, polyacetals, poly(Me methacrylate), polyethylene [9002-88-4], polypropylene [9003-07-0], polystyrene [9003-53-6], nylon, polycarbonates, cellulose, fluorocarbons, poly(tetrafluoroethylene), acrylonitrile-**butadiene-styrene** terpolymer [9003-56-9], polyoxyphenylenes, polysulfones, and chlorinated polyethers, and their mixts. The mixt. is molded or extruded, and the **binder** is solidified to form a solid structural component. The product is useful as formed sinks, wall and **floor** tiles, lab. table tops, **playground** equipment, and in the inner walls of pipes.

ST building material ash filler; polymeric mold ash filler

IT Coumarone-indene resins

Epoxy resins, uses and miscellaneous

Polyamides, uses and miscellaneous

Polyesters, uses and miscellaneous

Polyoxyphenylenes

Rubber, **butadiene-styrene**, uses and miscellaneous

RL: USES (Uses)

(building products from molded, ash fillers for)

IT Floors

(sheets for, ash fillers for polymeric)

IT Ashes (residues)

Ashes (residues)

Ashes (residues)

(fly, fillers, for plastic building materials)

IT Building materials
 (molded, polymeric, ash fillers for)
 IT 9002-86-2 9002-88-4 9003-07-0 9003-22-9 9003-53-6 9003-56-9
9010-79-1

RL: USES (Uses)
 (building products from molded, ash fillers for)

L74 ANSWER 93 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1973:406543 HCAPLUS

DN 79:6543

TI Resilient material of **particulate** rubber in a **binder**
 of butadiene and coumarone indene-polymers

IN Bennett, Richard J.; Gagle, Duane W.

PA Phillips Petroleum Co.

SO U.S., 6 pp.

CODEN: USXXAM

DT Patent

LA English

IC C08F

NCL 260829000

CC 38-9 (**Elastomers**, Including Natural **Rubber**)

Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3726944	A	19730410	US 1971-123049	19710310
PRAI	US 1971-123049		19710310		
AB	A resilient material useful as a covering for floors and outdoor surfaces , such as athletic tracks , was manufd. by binding reclaimed rubber particles with a butadiene-styrene block polymer [9003-55-8] contg. a coumarone-indene resin tackifying agent.				
ST	floor covering reclaimed rubber; butadiene styrene polymer binder ; coumarone indene resin tackifier				
IT	Binding materials (butadiene-styrene blocked polymers, for reclaimed rubber floor coverings)				
IT	Tackifiers (coumarone-indene resins, for reclaimed rubber floor coverings)				
IT	Rubber, natural, uses and miscellaneous Rubber, synthetic (reclaimed, floor coverings)				
IT	Coumarone-indene resins RL: USES (Uses) (tackifiers, for reclaimed rubber floor coverings)				
IT	9003-55-8 RL: USES (Uses) (block, binders , for recalimed rubber floor coverings)				

L74 ANSWER 94 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1974:102280 HCAPLUS

DN 80:102280

TI Cine film with a magnetic sound track

IN Kawaguchi, Hideo; Yamamoto, Nobuo; Furukawa, Katsuharu

PA Fuji Photo Film Co., Ltd.

SO Ger. Offen., 37 pp.

CODEN: GWXXBX

DT Patent

LA German
 IC G03C
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2320657	A1	19731108	DE 1973-2320657	19730424
	JP 49004503	A2	19740116	JP 1972-41123	19720424
	JP 51028223	B4	19760818		
	GB 1408656	A	19751001	GB 1973-19336	19730424
PRAI	JP 1972-41123		19720424		

AB To avoid removal of the sound track together with the underlying antihalation backlayer during processing of the film, either 0.05-7% of an aliph. or arom. compd. with 2-4 isocyanate or isothiocyanate groups is added to the sound track compn., or the alkali-sol. antihalation layer is coated with a 0.05-10% soln. of the isocyanate contg. 5-20% of a binder in the **area** of the **track** prior to its application. The isocyanate diffuses into the antihalation layer, rendering it locally insol. by reaction with the CO₂H groups in its binder. The 7-13 .mu. sound track is applied as a mixt. of ferromagnetic powder 20-40%, alkali-sol. **thermoplastic** or heat-hardenable binder 5-20%, and solvent, softening the antihalation layer, 35-80%. Thus, a subbed, biaxially oriented polyester film support was coated with a dispersion of 20-30 mm carbon black **particles** 5 in a soln. of a styrene-maleic anhydride (1:1) polymer 10 in MeOH 40 and Me₂CO 60 parts. After drying, a dispersion of .gamma.-Fe₂O₃ 30 parts in a soln. of nitro-cellulose 10 and di-Bu phthalate 2 in EtOAc 20, BuOAc 30, and Cellosolve Acetate 10 with 0.5 part of OCNCH₂CMe₂CH₂CHMeCH₂CH₂NCO was applied and dried at 40.degree..

ST magnetic sound track photog; cine film sound track

IT Photographic films

(cine, iron oxide compns. contg. alkali insol. isocyanate binders for)

IT Recording

(magnetic, iron oxide coatings contg. alkali insol. isocyanate binders for, for cine films)

IT Sound records

(on cine films, iron oxide compns. contg. alkali insol. isocyanate binders for)

IT **Rubber**, nitrile, uses and miscellaneous

Epoxy resins

RL: USES (Uses)

(sound track compns. contg. iron oxide, cyanates, and, for cine films)

IT Cyanic acid, esters

RL: USES (Uses)

(alkali insol. sound track compns. contg. iron oxide and, for cine films)

IT 1309-37-1, uses and miscellaneous

RL: USES (Uses)

(sound track compns. contg. cyanates and, alkali insol., for cine films)

IT 822-06-0 1431-54-5 4098-71-9 16938-22-0

RL: USES (Uses)

(sound track compns. contg. iron oxide and, alkali insol., for cine films)

IT 9003-22-9 9004-70-0

RL: USES (Uses)

(sound track compns. contg. iron oxide, cyanates, and, for cine films)

L74 ANSWER 95 OF 95 HCAPLUS COPYRIGHT 2003 ACS

AN 1972:476199 HCAPLUS

DN 77:76199

TI Covering for sport fields from rubber

IN Allen, Michael George; Van Dyke Tiers, Georges; Buchholtz, Theodore

PA Minnesota Mining and Manufg. Co.

SO Ger. Offen., 29 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C08G; E01C

CC 37-1 (Plastics Fabrication and Uses)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2156255	A1	19720518	DE 1971-2156255	19711112
	US 3801421	A	19740402	US 1970-87682	19701109
	BE 775042	A1	19720508	BE 1971-110249	19711108
	FR 2112547	A5	19720616	FR 1971-39935	19711108
	FR 2112547	B1	19751010		
	ZA 7107478	A	19720726	ZA 1971-7478	19711108
	BR 7107439	A0	19730313	BR 1971-7439	19711108
	IT 942302	A	19730320	IT 1971-53944	19711108
	AU 7135471	A1	19730517	AU 1971-35471	19711108
	CH 547915	A	19740411	CH 1971-16205	19711108
	GB 1373923	A	19741113	GB 1971-51817	19711108
	CA 1016330	A1	19770830	CA 1971-127160	19711108
PRAI	US 1970-87682	A	19701109		
	US 1970-88219	A	19701109		

AB A mixt. of vulcanized rubber **particles** (SBR and natural rubbers) 400, polypropylene glycol (mol. wt. 2000) 50, polypropylene ether triol (mol. wt. 1500) 15, a xanthate catalyst (prepd. from Na 44, dipropylene glycol 1000, and CS2 145 parts) 3, and Mondur MRS 32 parts is hardened under 308 kg/cm² pressure to prep. a covering material that is bonded to an asphalt surface with a polyurethane adhesive to prep. a **surface** for a running **track** or **tennis court**. The covering is also covered with synthetic turf to prep. football fields, etc.

ST polyisocyanurate **binder** rubber **particle**; rubber sport field covering

IT Rubber, **butadiene-styrene**, uses and miscellaneous
 Rubber, natural, uses and miscellaneous
 (in coverings for sports fields, urethane polymer **binders** for)

IT Urethane polymers, uses and miscellaneous
 RL: USES (Uses)
 (in rubber coating materials for sports fields)

IT Sporting goods
 (rubber-urethane polymer field surfaceing compns.)

IT Coating materials
 (rubber-urethane polymer, for sports fields)

IT Isocyanic acid, polymethylene polyphenylene ester
 RL: USES (Uses)
 (in polypropylene glycol-rubber compns. for **surfaceing** materials for **sports** fields)